

Lesson 1

Force.com Configuration
Relationships





Objective

Introduction & Agenda

Introduction to CRM

Force.com Configuration

- Standard & Custom Objects Review
- Apps review
- User Interface
- Fields & Field Dependencies
- Introducing Page Layouts
- Compact Layouts/Record Types
- Introducing Search Layouts

Relationships

- Master - Details, Many-to-Many, Parent - Child Relationship
- Customizing Related Lists in a Many-to-Many Relationship
- Roll-Up Summary Fields
- Formula Fields



Administration



Set-up the Training Org



All exercises will be performed on a new 30 day training org
To sign-up for your training org, enter the link and follow the instructions:

https://www.salesforce.com/form/signup/freetrial_training.jsp

Select: **Building Applications on Force.com**

You will also need to download the various exercise books
When instructed from the attachments tab

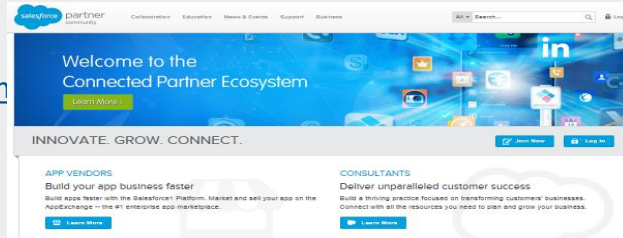


Logging into the Partner Training Catalog



All videos can be found in the Partner Training Catalog.
Please log into the Partner Community via:
<https://partners.salesforce.com/>

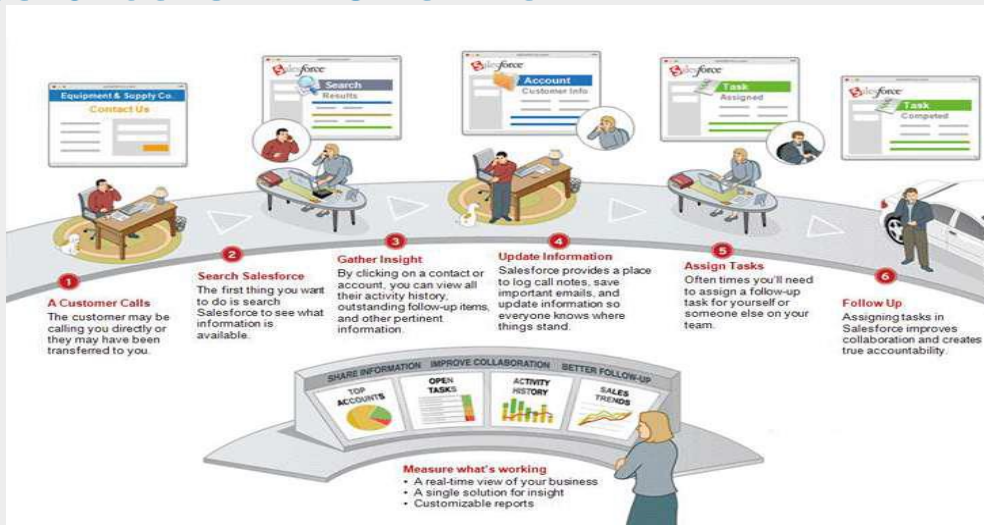
and go to:
<https://partn>



Introduction to CRM



Salesforce CRM Overview





Salesforce CRM Overview

Salesforce CRM Overview

What is SalesForce.Com?

Salesforce CRM is a web-based Customer Relationship Management (CRM) service.

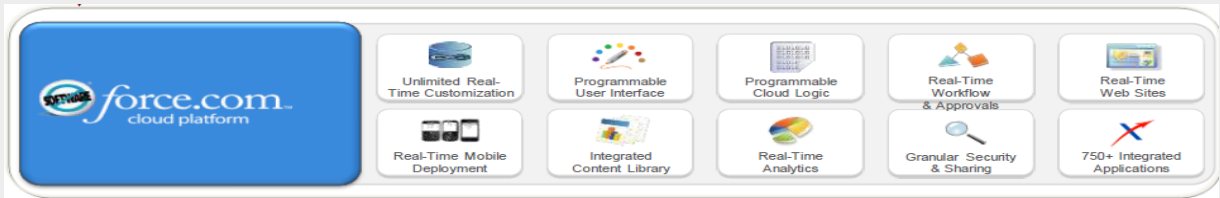
- It hosts the applications offsite & is best known for its Customer Relationship Management (CRM) products.
- It allows you to create a single view of your customers and leads, coordinate your sales, marketing and customer service activities and provides an overview into how your business is operating.
- You can generate, manage, and report on leads, opportunities and track results from first contact to won or lost business.
- You can see the results of your marketing campaigns and understand their impact using real-time analytics.
- It helps to improve efficiency, reduces administration time and lets you focus more on your business by reducing the time taken to search for information by providing a centralised service.

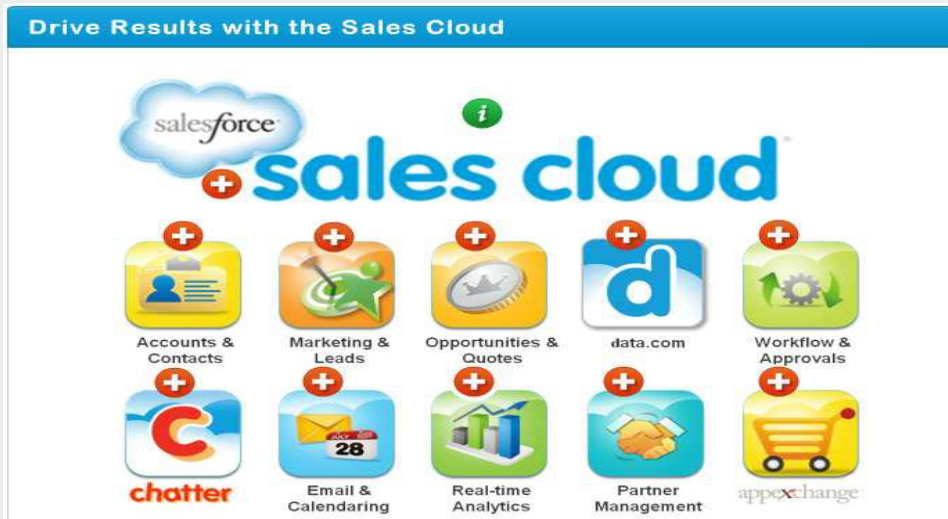




What is Force.com?

Welcome to Cloud2





Sales Cloud

Business Drivers, Processes and Sales Cloud Solutions



Business Drivers	Business Processes	Sales Cloud Solutions	
Build a Strong Pipeline	Lead Generation	Automated Lead Capture and Import	Sales Force Automation (SFA)
	Lead Qualification	<ul style="list-style-type: none"> Lead Scoring & Routing Lead Conversion Alerts & Monitoring 	
Manage the Funnel	Sales Methodology	Opportunity Management	
	Visibility of the Sales Forecast	Forecasts	
Improve Sales Rep Productivity	Account and Contact Management	<ul style="list-style-type: none"> 360 Degree View Approvals 	
	Activity Management	Activity Sharing & Tracking	Marketing
Drive More Business	Demand Generation	Campaign Management Segmentation	
	Search Marketing	<ul style="list-style-type: none"> Website Integration Google AdWords 	
	Lead Handoff	Feedback from Sales	
Align Sales and Marketing	Brand Management	<ul style="list-style-type: none"> Email Templates Communications 	
	Marketing Collateral Management	Collateral & Documents	



Service Cloud

Service Cloud



Salesforce Application

Salesforce Application



The screenshot shows the Salesforce Chatter interface for user Rob Davidson. The top navigation bar includes the Salesforce logo, a search bar, and user information. The main feed displays posts from other users, including Ling Wu and Matt Wilson. A red box highlights the 'Sales' dropdown menu, which lists various Salesforce features and communities.

Sales Dropdown Menu:

- Call Center
- Marketing
- Community
- Salesforce Chatter
- Content
- Recruiting
- Checkout
- AppExchange
- Developer Community

salesforce



Salesforce Objects

Salesforce Object

- What are Objects?
- How are they related?
- How can I navigate between them?



An object is a table of data containing records.

	A	B	C	D
1	Account Owner	Account Name	Industry	Billing City
2	Phil Smith	ABC Labs	Biotechnology	San Jose
3	Phil Smith	Acme Inc.	Manufacturing	Atlanta
4	Phil Smith	Acme-NY	Manufacturing	New York
5	Phil Smith	American Bank	Banking	Charlotte
6	Phil Smith	American Package	Shipping	Atlanta
7	David Hudson	American Package_UK	Shipping	London
8	Phil Smith	AMP Industries	Manufacturing	San Francisco
9	Phil Smith	AmShip Corporation	Shipping	Memphis
10	Phil Smith	Arbuckle Laboratories	Biotechnology	Arbuckle Park
11	David Hudson	Arbuckle Laboratories - Austria	Biotechnology	Vienna
12	David Hudson	Arbuckle Laboratories - France	Biotechnology	Paris
13	Anjana Shah	Arbuckle Laboratories - Germany	Biotechnology	Weisbaden
14	Phil Smith	Cable Inc.	Entertainment	New York
15	Phil Smith	Cable Inc.	Technology	Atlanta





1.4: Standard Objects

Standard Objects - Accounts

Accounts

Contacts

Opportunities


Cases

Solutions

Campaigns

Leads

Accounts



- Organizations that you need to track, such as customers
- Have related contacts, opportunities, and cases

Home | Chatter | Leads | **Accounts** | Contacts | Opportunities | Reports | Groups | Dashboards

Account: ABC Labs

Customize Page | Edit Layout | Printable View | Help for this Page

Show Feed Follow

Opportunities | Contacts | Account History | Open Activities | Activity History | Cases | Partners | Notes & Attachments | Account Team

Account Detail Edit Delete Sharing

Account Owner: [John Smith] Change

Account Name: ABC Labs Done Refresh

Parent Account:

Credit Status: Excellent

Phone: 1-800-555-2001

Fax: 1-800-555-2000

Website: <http://www.ABC Labs.com>

Prospect Rating: Warm



1.4: Standard Objects

Standard Objects - Contacts



Accounts

Contacts

Opportunities

Cases

Solutions

Campaigns

Leads

Contacts



- Individuals associated with your accounts
- Have related cases

Home | Chatter | Leads | Accounts | **Contacts** | Opportunities | Reports | Groups | Dashboards

Contact: **Arnold Adams** Customize Page | Edit Layout | Printable View | Help for this Page

Show Feed | Follow

Open Activities | Activity History | Opportunities | Cases | Notes & Attachments | CRM Email Status | Campaign History

Contact Detail Edit | Delete | Clone | Sharing | Request Update

Contact Owner	Chel Smith (Change)	Phone	1-408-555-2122
Name	Arnold Adams	Mobile	
Account Name	ABC Labs	Email	adams@acmlabs.com
Title	IT Manager	Reports To	[View Org Chart]
Position	IT		

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1.4: Standard Objects

Standard Objects - Opportunities

Accounts

Contacts

Opportunities

Cases

Solutions

Campaigns

Leads

Opportunities



- Potential sales associated with your accounts
- Make up your pipeline and forecasts
- Associated with contacts



The screenshot shows the Salesforce interface for an Opportunity. The top navigation bar includes Home, Chatter, Leads, Accounts, Contacts, Opportunities (highlighted), Reports, Groups, and Dashboards. The main content area displays the Opportunity Name 'Canson - 18 Spider 3 Series Laptops' and a 'Show Feed' button. Below this, there are tabs for 'Following' and 'Opportunity Detail'. The 'Opportunity Detail' section shows fields for Opportunity Name, Account Name, Type, Primary Campaign, Discount Percentage, Commission, Region, Estimated Amount, and Approval Status. The 'Following' section shows fields for Close Date, Stage, Needs Analysis, Probability, Amount, Opportunity Record Type, and Opportunity Status.





Standard Objects

Standard Objects - Cases

Accounts

Contacts

Opportunities

Cases

Solutions

Campaigns

Leads

Cases



- Customer feedback, problems, or questions
- Associated with accounts and contacts
- Used to resolve issues

Home Chatter Files Accounts Contacts **Cases** Solutions Reports Da

Case 00001004

Customize Page | Edit Layout | Printable View | Help for this Page

[Solutions \[0\]](#) | [Open Activities \[0\]](#) | [Activity History \[0\]](#) | [Case Comments \[0\]](#) | [Case History \[0\]](#) | [Attachments \[0\]](#)

Case Detail Edit Delete Close Case Clone

Case Owner  Tim Howe [Change]

Case Number 00001004

Contact Name Arnold Adams

Account Name ABC Labs

Subject Screen Flicker on Spider Series Laptop

Contact Phone 1-408-555-2122

Contact Email arnold.adams@trainingorg-abclabs.com

Standard Objects

Standard Objects - Solutions



Accounts

Contacts

Opportunities

Cases

Solutions

Campaigns

Leads

Solutions



- Descriptions of customer issues and resolutions
- Associated with cases

Home Chatter Leads Accounts Contacts Opportunities Reports Dashboards Documents

Solution

Why is my monitor flickering?

Customize Page | Edit Layout | Printable View | Help for this Page

Back to List: Solutions

Cases 10 | Solution History 12 | Attachments 10

Solution Detail

Solution Number 00000001

Visible in Self-Service Portal ☐

Status Draft

Visible in Public Knowledge Base ☐

▼ Detail Information

Solution Title

Why is my monitor flickering?

Solution Details

To cut down on your monitor flicker, select Properties - Settings - Advanced - Monitor - and click the Apply button.

Standard Objects

Standard Objects - Campaigns



Accounts

Contacts

Opportunities


Cases

Solutions

Campaigns

Leads

Campaigns



- Marketing projects
- Related leads and contacts show as campaign members
- Have related opportunities

[Home](#) [Chatter](#) [Files](#) **Campaigns** [Leads](#) [Contacts](#) [Opportunities](#) [Reports](#)

Campaign

Spider 2 Series Laptop Campaign - Email

[Campaign Hierarchy \(1\)](#) | [Open Activities \(0\)](#) | [Activity History \(0\)](#) | [Opportunities \(0\)](#)

Campaign Detail [Edit](#) [Delete](#) [Clone](#) [Manage Members](#)

Campaign Owner

Mimi Sato [\[Change\]](#)

Campaign Name

Spider 2 Series Laptop Campaign - Email [View Hierarchy](#)

Campaign

Active

☒

Parent Campaign

Description

Email campaign for the Spider 3 series laptop.





Standard Objects

Standard Objects - Leads

Accounts

Contacts

Opportunities

Cases

Solutions

Campaigns

Leads

Leads



- Individuals interested in your products or services
- Associated to campaigns
- Converted into accounts, contacts, and opportunities

Home | Chatter | **Leads** | Accounts | Contacts | Opportunities | Reports | Dashboards | Documents

Lead: **Jon Airaudi** Customize Page | Edit Layout | Printable View | Help for this Page

Show Feed Follow

Back to List: Leads

Open Activities | Activity History | HTML Email Status | Campaign History

Lead Detail Edit | Delete | Convert | Clone | Sharing | Find Duplicates

Lead Owner: **Lorenzo Costa** (changed)

Lead Status: Open

Name: Jon Airaudi

Phone: 1-415-596-4274

Company: Berk Math Inc

Email: jon.airaudi@trainingorg.berkmathinc.com

Title: Director

Rating: Warm

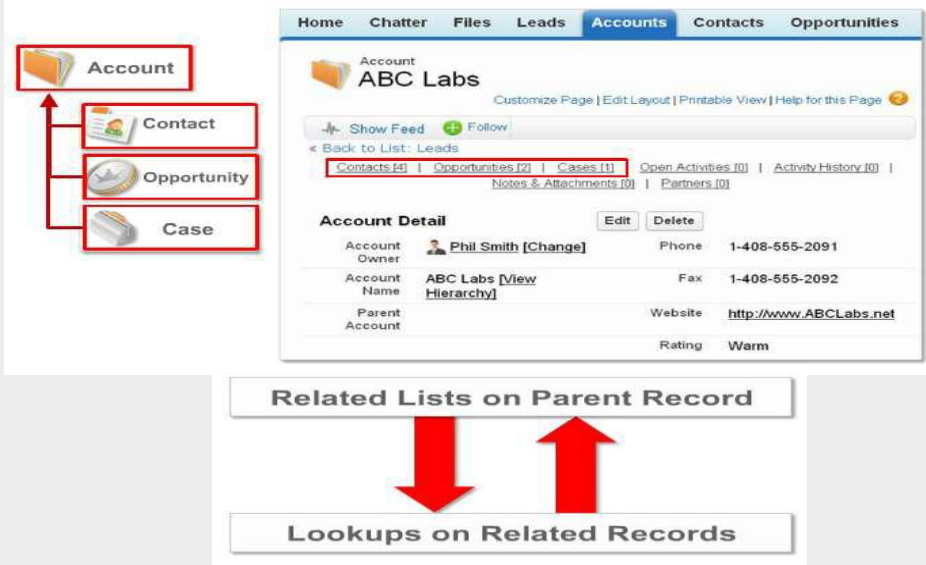
Region:

Employee Hierarchy



Salesforce Objects

Salesforce Object Relationships



Introduction to Force.com



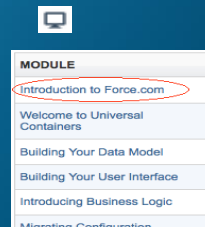
Video: Introduction to Force.com

This training introduces you to the Force.com platform features and functionality (17 min.)

How to Get to this training video ?

- You need an **@partnertraining.com** account.
- If you don't have this account and you work for a Salesforce partner, you need to request an invite from the partner admin in your company to the partner community. Once you have the partner community access you can create a partner training login = xxxx@partnertraining.com
- To avoid a mixup with saved credentials open a private window in a new browser.
- Browse to <http://help.salesforce.com> and log in with your @partnertraining.com account.
- Search for "Building Application with Force.com part 1"
- Make sure to select this training (pay attention to the video logo):

- Select the module
- Enjoy the 17 min video
- Direct Link: (only available for partner training users)
<https://help.salesforce.com/HTTTrainingModulesDetail?courseId=a1S30000000gvGyEAI>



Hands-on Exercise



Prepare your training org

View the hands on exercise steps in the “Introduction to Force.com” Exercise Guide

https://lms.cfs-api.com/v1/content/1ddba721-6e5a-49ab-816c-610776ccbd8a/presentation_content/external_files/introductiontoforce.comexerciseguide.pdf

Exercise 0-1: Sign up for a training org
Exercise 0-2: Prepare your training org

Make sure that all system messages from the org come to you
Make sure you can access the org outside of your corporate network.



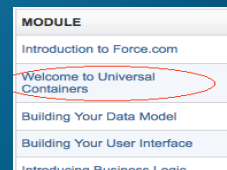
Task: Create a custom Position object.

Video: Welcome to Universal Containers

Learn about our case study organization, Universal Containers, and the recruiting application they need to build in Salesforce to solve their business issues. (8 min)

How to Get to this training video ?

- You need an **@partnertraining.com** account.
- To avoid a mixup with saved credentials open a private window in a new browsr.
- Browse to <http://help.salesforce.com> and log in with your @partnertraining.com account.
- Search for "Building Application with Force.com part 1"
- Make sure to select this training (pay attention to the video logo):



- Select the module "Welcome to Universal Containers":
- Enjoy the 8 min video.
- Direct Link: (only works after you've logged in with your @partnertraining.com account, paste in browser)
<https://help.salesforce.com/HTTrainingModulesDetail?courseId=a1S30000000gvGyEAI>





Universal Containers RECRUITING

Mario Ruiz

Recruiter



Recruiters

How many positions
are open by a
department?

Ben Stuart

SW Dev Manager



Hiring Managers

What are the qualifications
of all candidates that have
applied for a given position?

Megan Smith

VP Human Resources

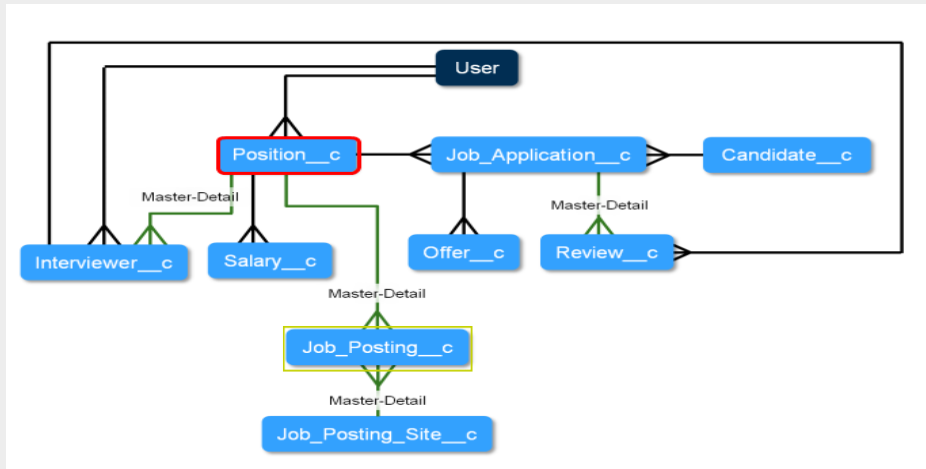


Human Resources Managers

What are the recruiting
patterns of new hires?



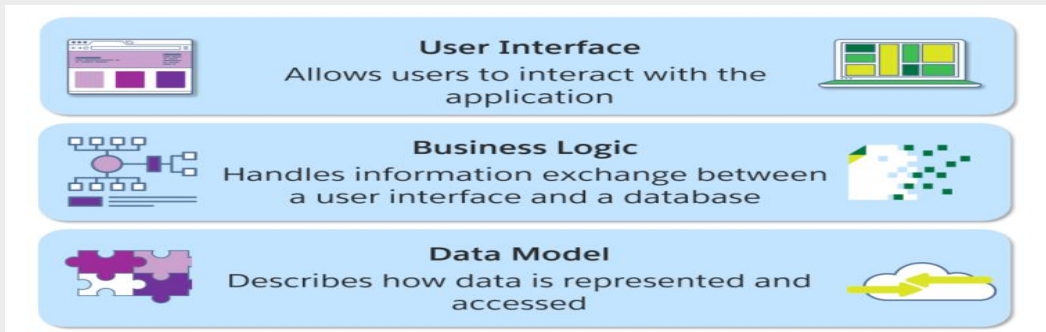
What is the Structure we Need?



What is a Tiered Model?



- In a tiered model the application development is divided into different layers
- This makes it possible for different developers work on different layers independently and specialize in specific areas

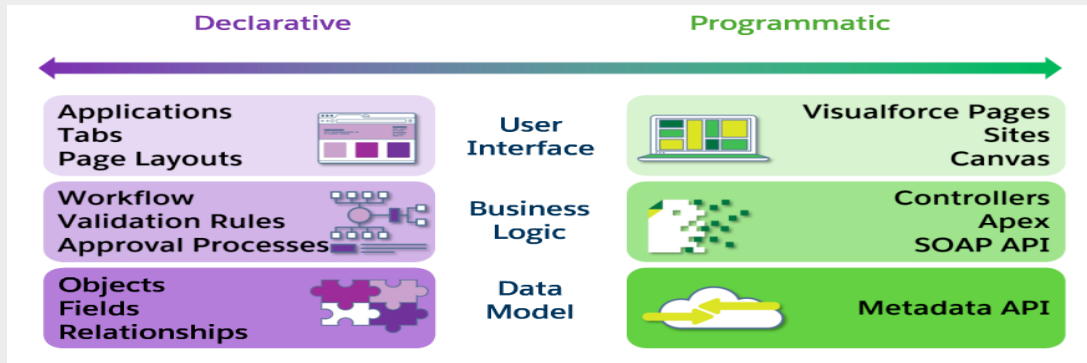


- Application requirements are defined from the top down and built from the ground up

Application Building Blocks



- The declarative framework is a set of easy-to-use tools to build or customize applications using clicks not code
- Using the programmatic framework provides additional control and flexibility to your customizations



Video: Building Your Data Model

Learn how to create custom objects, custom fields and custom relationships, filters and how to use schema builder (44 min)

How to Get to this training video ?

- You need an **@partnertraining.com** account.
- To avoid a mixup with saved credentials open a private window in a new browser.
- Browse to <http://help.salesforce.com> and log in with your @partnertraining.com account.
- Search for “Building Application with Force.com part 1”
- Make sure to select this training (pay attention to the video logo):



MODULE
Introduction to Force.com
Welcome to Universal Containers
Building Your Data Model
Building Your User Interface
Introducing Business Logic

- Select the module “Building Your Data Model”:
- Enjoy the 44 min video.
- Direct Link: (only works after you’ve logged in with your @partnertraining.com account, paste in browser)
<https://help.salesforce.com/HTTrainingModulesDetail?courseId=a1S30000000gvGyEAI>





What are Custom Objects?

Objects you create in your own org.

Custom Fields
Relationships to other Objects
Page Layouts



Hands-on Exercise



View the hands on exercise steps in the [Building Applications with Force.com - Part 1 “Building Your Data Model” Exercise Guide](#)

https://lms.cfs-api.com/v1/content/866451e8-66c8-496d-b5e1-6cf54063d7bd/presentation_content/external_files/buildingyourdatamodelexerciseguide.pdf

Exercise 2-1: Creating Custom Objects

Exercise 2-2: Creating Custom Fields

Exercise 2-3: Creating Lookup Relationships

Exercise 2-4: Create Master-Detail Relationships

Exercise 2-5: Creating a Custom Junction Object

Exercise 2-6: Creating a Lookup Filter



Task: Create a custom Position object.

Standard and Custom Fields



Standard fields:

- Change the field label
- Add help text
- Add, edit and reorder values in picklists

Custom fields:

- Can be deleted
- Changing the data type of a custom field will result in data lost.
- List views based on the field will be deleted, and assignment and escalation rules may be affected. Only modify fields with no data, or consider using new fields.
- Deleting a field will also result in data loss. Salesforce stores deleted fields and their data for a maximum of 15 days, during which you can undelete or permanently erase them



Field-level help allows you to provide information about the purpose and function of a field for your users. The text will be available on any detail or edit page where the field appears.

- Check the parent - child

Standard Fields



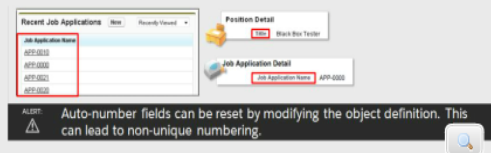
ID

- Provides a unique identifier for each record
- Is system-generated and cannot be modified
- Is indexed
- First three characters identify the type of object



Name

- Is a short description to identify a record's content
- Is indexed
- Is a required field
- Can have two data types:
 - Text: user assigned, not necessarily unique, modifiable
 - Auto-Number: system-generated, unique (usually), not modifiable
- Appears as the first column by default in list views and related lists



- Field-level help allows you to provide information about the purpose and function of a field for your users. The text will be available on any detail or edit page where the field appears.

Standard Fields



Owner

- Represents an individual or a group of users
- Default owner of a record is its creator
- Owner is granted additional privileges

Position: Black Box Tester

Customize Page | Edit Layout | Printable View | Help for this Page

Position Detail

Owner: Mia Rodriguez (Change)

Title: Black Box Tester

Department: Engineering

Location: San Francisco, CA

Pay Grade: EN0-200

Start Date:

Other System Fields

- Created By: Provides a reference to the user who created the record
- Last Modified By: Provides a reference to the user who last modified the record
- Created Date: Provides the date/time that the record was created
- Last Modified Date: Provides the date/time that the record was last modified

Job Application: APP-0000

Customize Page | Edit Layout | Printable View | Help for this Page

Job Application Detail

Job Application Number: APP-0000

Position: Black Box Tester

Candidate: C-0000

Candidate Summary: Jack Fallon (202) 555-1212

Created By: Admin User, 8/11/2009 1:55 PM

Last Modified By: Megan Smith, 8/11/2009 1:55 PM



- Field-level help allows you to provide information about the purpose and function of a field for your users. The text will be available on any detail or edit page where the field appears.

Custom Fields



- Store information and data about custom objects.
- Some examples of available field types include, Text, Formula, Number, Checkbox, and Picklist.
- Allow you to add field level help.
- Enable you to define additional properties, including required, unique, and external ID.
- Can be changed to another data type but may cause data loss.
- When you delete a custom field, both the field and the data are deleted.

The screenshot shows the 'Field Label' configuration for a custom field named 'Product'. The field type is 'Picklist'. The values entered are 'Laptops', 'Printers', 'Desktops', and 'Warranty'. Below the list, there are two checkboxes: 'Sort values alphabetically, not in the order entered. Values will be displayed in this order.' and 'Use first value as default value'. The 'Field Name' is also 'Product', and there is a 'Description' field at the bottom.

Field Label: Product

Please enter the list of values for the picklist field below. Each value should be on a new line.

- Laptops
- Printers
- Desktops
- Warranty

☐ Sort values alphabetically, not in the order entered. Values will be displayed in this order.

☐ Use first value as default value

Field Name: Product

Description:

- The limit on the number of custom fields per object depends on Salesforce edition.
- Custom fields support a number of data types.



Picklists



Select values from a predefined list.

Use picklists to:

- Speed up data entry.
- Maintain data quality by allowing only permissible values.
- Facilitate searching, reporting, and filtering.

Picklists

Lead Source: --None-- (dropdown menu open showing options: --None--, Advertisement, Employee Referral, External Referral, Partner, Public Relations, Seminar - Internal, Seminar - Partner, Trade Show, Web, Word of mouth, Other)

Picklist (Multi-Select)

Product Interest: Available (Enterprise Laptop, Consumer Desktop, Consumer Laptop) | Chosen (Enterprise Desktop, Enterprise Printer)

- Allow users to select either single or multiple values from a predefined list during data entry.
- Dependent picklists give you the ability to create multi-level dependencies



- You can link two picklists together to create a controlling-dependent relationship. Users select a value in a controlling picklist, which filters the values available in a second, dependent picklist.

Dependent Picklists



- With custom fields, you can define dependencies between picklists.
- When implementing field dependencies, you select which picklist is dependent and which is controlling.
- Using dependent picklists enables you to create simple lists to categorize data.

Title: Salesforce Administrator
Type: Full Time
Department: --None--
Location: --None--
Pay Grade: --None--
Hiring Manager: --None--

Title: Salesforce Administrator
Type: Full Time
Department: Finance
Location: --None--
Pay Grade: --None--
Hiring Manager: --None--
Duration: --None--
Legacy Position Number: --None--



Look-up Fields



Allow users to select a record from another object, including the User object.

- They can link two records together to create a parent-child relationship.
- Use a lookup filter to limit the records available in the lookup.
- Lookup filter that references another field on the same object to create a dependent lookup.
- For example, add a lookup filter to the case **Contact** field (dependent) so that it only displays contacts related to the account selected in the case **Account Name** field (controlling).



When users change the value in the controlling field, they will see an error message if the dependent lookup value no longer meets the filter criteria.

Field History Tracking



Can be enabled on an object to track changes on up to 20 standard or custom fields.

- Changes can be viewed on a record's History related list or through History reports.
- Track date and time of change.
- Track the user making the change.
- Track old and new values (not on multi-select picklists and large text fields).
- History Tracking can be performed on all custom objects and the following standard objects:
Accounts, Contacts, Leads, Cases, Solutions, Contracts, Opportunities



Accounts

Hands-on Exercise



View the hands on exercise steps in the **Building Applications with Force.com - Part 1** “Building Your Data Model” **Exercise Guide**

https://lms.cfs-api.com/v1/content/866451e8-66c8-496d-b5e1-6cf54063d7bd/presentation_content/external_files/buildingyourdatamodelexerciseguide.pdf

Exercise 2-1: Creating Custom Objects

Exercise 2-2: Creating Custom Fields

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Exercise 2-4: Create Master-Detail Relationships

Exercise 2-5: Creating a Custom Junction Object

Exercise 2-6: Creating a Lookup Filter



Task: Create a custom Position object.



Master Detail Relationships



- A relationship between two different types of records that associates the records with each other.
- The master object can be a standard object, such as Account or Opportunity, or a custom object.
- When a master record is deleted, the related detail records are also deleted.
- The Owner field on the detail record is automatically set to the owner of the master record.
- Custom objects on the “detail” side of a master-detail relationship can't have sharing rules, manual sharing, or queues, as these require the Owner field.
- The security settings for the master record control the detail record.
- The master-detail relationship field is required on the page layout of the detail record.



- 1) Under Master Detail the lookup field on the child record is a required field (e.g. There must be an opportunity for the shipping record)
- 2) Under Master Detail the lookup field becomes a read only field as soon as the record is saved.
- 3) The only way to change the association between the child and the parent is by deleting the child and re-entering under the new parent.
- 4) Under Master Detail there is a cascade delete taking place. E.g. Delete an Account and all the associated Contacts, Opportunities, etc. Are also deleted. Under Look up this is not the case. E.g. Deleting a Case record does not result in all the associated Solutions being deleted.
- 5) Roll up summary fields can only be created on the Parent record of a Master Detail relationship. (10 max)
- 6) A custom object defined in a Master Detail relationship that appears in a report will display all the object fields as well as all the parent's fields.

Look-up Relationships



- A relationship between two records to associate records with each other.
- Allows users to click a lookup icon on a record and select another record from a popup window.
- On the associated record, you can display a related list to show all of the records that have been linked to it.
- If a lookup field references a record that has been deleted, by default Salesforce clears the lookup field.
- Alternatively, you can prevent records from being deleted if they're in a lookup relationship.
- Security is controlled by OWD



- 1) A custom object created with a Look up relationship appears for full OWD options and sharing rules. A custom object created with a Master Detail relationship can only have the option Controlled by Parent.
- 2) A custom object defined in Look-up relationship that appears in a report will display only the object's fields are displayed. You may need to create a CRT to get other fields in the fields' list

Relationship Types



Lookup Relationship	Master-Detail Relationship
Parent field on child is not required by default.	Parent field on child is required.
Security and access are independent for objects.	Access to parent determines access to children.
Deletion removes the value only from the lookup field.	Deleting a parent automatically deletes the child.
Link objects across multiple layers.	Link objects can be up to 3 layers. A standard object cannot be a child.
A child object can have up to 40 parents.	A child object can have 2 parents.
Lookup field on page layout depends on required/optional choice.	Lookup field on page layout is required.
Cross-object field updates and roll-up summary fields cannot be done.	Cross-object field updates and roll-up summary fields can be done.



Hands-on Exercise – Building Your Data Model



View the hands on exercise steps in the **Building Applications with Force.com - Part 1 “Building Your Data Model” Exercise Guide**

https://lms.cfs-api.com/v1/content/866451e8-66c8-496d-b5e1-6cf54063d7bd/presentation_content/external_files/buildingyourdatamodelexerciseguide.pdf

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Exercise 2-5: Creating a Custom Junction Object

Exercise 2-6: Creating a Lookup Filter

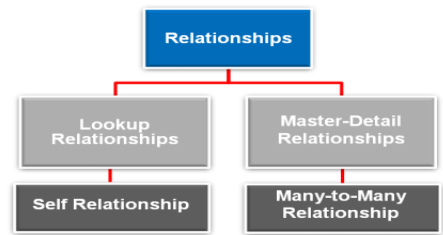
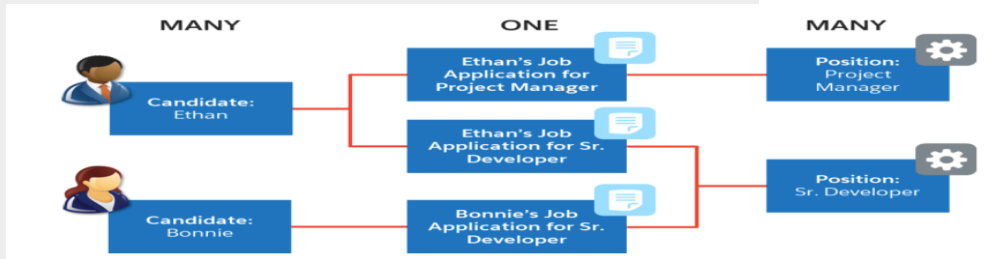


Task: Create a custom Position object.

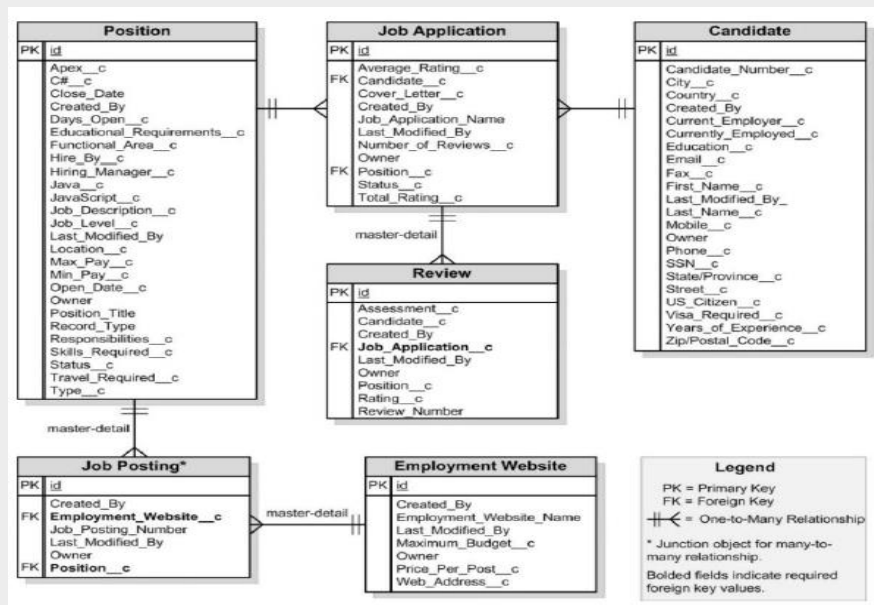


Many-to-Many Relationships

- A many-to-many relationship allows each record of one object to be linked to multiple records from another object and vice versa.
- Many-to-many relationships are implemented through the use of junction objects.



A relationship where each side of the relationship can have many children on the other side.



salesforce

You can use master-detail relationships to model *many-to-many* relationships between two standard objects, two custom objects, or a custom object and a standard object.

Hands-on Exercise



View the hands on exercise steps in the **Building Applications with Force.com - Part 1** “Building Your Data Model” **Exercise Guide**

https://lms.cfs-api.com/v1/content/866451e8-66c8-496d-b5e1-6cf54063d7bd/presentation_content/external_files/buildingyourdatamodelexerciseguide.pdf

Exercise 2-1: Creating Custom Objects
Exercise 2-2: Creating Custom Fields
Exercise 2-3: Creating Lookup Relationships
Exercise 2-4: Create Master-Detail Relationships
Exercise 2-5: Creating a Custom Junction Object
Exercise 2-6: Creating a Lookup Filter



Task: Create a custom Position object.



Lookup Filters



Lookup filters:

- Limit search results for related fields.
- Can compare fields to other fields or static values.
- Can be required or optional.

The screenshot shows the 'Filter Criteria' configuration window in Salesforce. At the top, there is a tab 'Insert Suggested Criteria' and a 'Clear Filter Criteria' link. The main configuration area is divided into two columns: 'Field' and 'Value / Field'. The 'Field' column contains a dropdown menu with 'Position: Department' selected. The 'Operator' column has a dropdown menu with 'equals' selected. The 'Value / Field' column has a dropdown menu with 'Field' selected, and a text input field containing 'Hiring Manager: Department'. Below this, there is a 'Clear' button. The 'AND' section has a dropdown menu with '--None--' selected and a text input field with the placeholder 'Begin typing to search for a field...'. Below this, there is a 'Clear' button. The 'Advanced Options...' section is expanded, showing 'Filter Type' with two radio buttons: 'Required' (selected) and 'Optional'. The 'Required' option has a description: 'The user-entered value must match filter criteria. If it doesn't, display this error message on save: Value does not exist or does not match filter criteria.' Below this is a 'Reset to default message' link. The 'Optional' option has a description: 'The user can remove the filter or enter values that don't match criteria.' Below this is a 'Lookup Window Text' section with a text input field containing 'Add this informational message to the lookup window.' At the bottom, there is an 'Active' section with a checkbox labeled 'Enable this filter.' which is checked.

Filter Criteria [Insert Suggested Criteria](#) [Clear Filter Criteria](#)

Field	Operator	Value / Field
Position: Department	equals	Field Hiring Manager: Department Clear

AND: --None-- Value [Clear](#)

[Advanced Options...](#)

Filter Type

☒ **Required.** The user-entered value must match filter criteria.
If it doesn't, display this error message on save:
Value does not exist or does not match filter criteria.
[Reset to default message](#)

☐ **Optional.** The user can remove the filter or enter values that don't match criteria.

Lookup Window Text: Add this informational message to the lookup window.

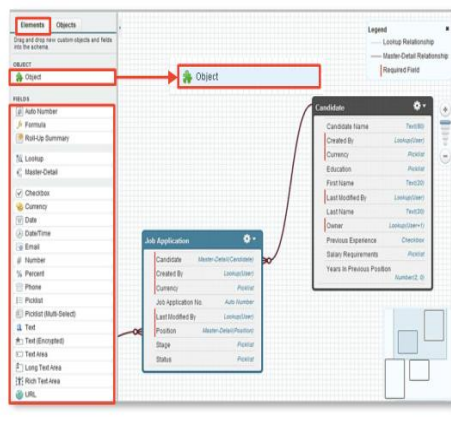
Active ☒ Enable this filter.



Schema Builder



- Provides a dynamic environment to add new custom objects, custom fields, and relationships
- Provides a graphical view of Salesforce objects and their relationships
- Can be accessed by navigating to **Setup | Schema Builder**



The screenshot shows the 'Create New Object' dialog box. It contains the following fields and options:

- Label**: Text input field.
- Plural Label**: Text input field.
- Starts With**: Dropdown menu with 'Consonant' selected.
- Object Name**: Text input field.
- Description**: Text input field.
- Record Name**: Text input field.
- Data Type**: Dropdown menu with 'Text' selected.
- Allow Reports**: Checkbox.
- Allow Activities**: Checkbox.
- Track Field History**: Checkbox.
- In Development**: Radio button group with 'In Development' and 'Deployed' options.
- Add Notes and Attachments related list to**: Checkbox.
- Buttons**: 'Save' and 'Cancel' buttons.



Building your User Interface

-
- Custom Applications
 - Custom Tabs
 - Modify Page Layouts



Video: Building Your User Interface

See how to modify the user interface with page layouts, custom applications and custom tabs.(29 min)
Custom Applications, Custom Tabs, Modify Page Layouts, ...

How to Get to this training video ?

- You need an [@partnertraining.com](https://partnertraining.com) account.
- To avoid a mixup with saved credentials open a private window in a new browsr.
- Browse to <http://help.salesforce.com> and log in with your [@partnertraining.com](https://partnertraining.com) account.
- Search for “Building Application with Force.com part 1”
- Make sure to select this training (pay attention to the video logo):



- Select the module “Building Your User Interface”:
- Enjoy the 29 min video.
- Direct Link: (only works after you’ve logged in with your [@partnertraining.com](https://partnertraining.com) account, paste in browser)
<https://help.salesforce.com/HTTrainingModulesDetail?courseId=a1530000000gvGyEAI>



MODULE
Introduction to Force.com
Welcome to Universal Containers
Building Your Data Model
Building Your User Interface
Introducing Business Logic
Migrating Configuration



Hands-on Exercise



View the hands on exercise steps in the **Building Applications with Force.com**
“Building Your User Interface” Exercise Guide

https://lms.cfs-api.com/v1/content/3369d5e3-7116-4772-ad54-b90d9eace3bc/presentation_content/external_files/buildingyouruserinterfaceexerciseguide.pdf

Exercise 3-1: Creating a Custom Application

Exercise 3-2: Creating Custom Tabs

Exercise 3-3: Customizing Page Layouts

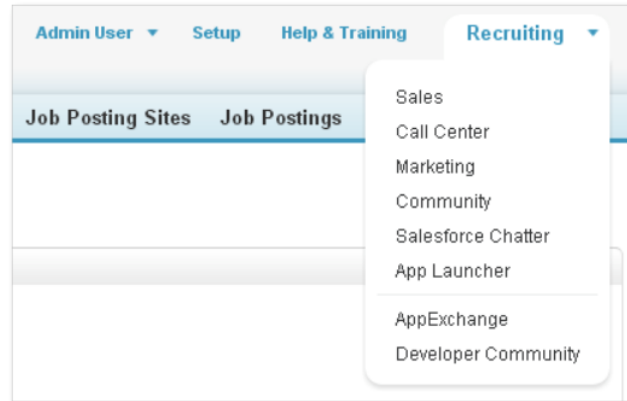


Task: Create a custom Position object.

Custom App



- There are three declarative ways to make changes to the user interface: custom applications, custom tabs, and page layouts.
- A Force.com custom app consists of a name, a description, an ordered set of tabs, and optionally, a custom logo and a landing page.
- Salesforce provides standard applications such as Sales and Call Center.
- You can create custom applications to meet your unique business needs.



Hands-on Exercise



View the hands on exercise steps in the **Building Applications with Force.com**
“Building Your User Interface” Exercise Guide

https://lms.cfs-api.com/v1/content/3369d5e3-7116-4772-ad54-p90d9eace3bc/presentation_content/external_files/buildingyouruserinterfaceexerciseguide.pdf

Exercise 3-1: Creating a Custom Application

Exercise 3-2: Creating Custom Tabs

Exercise 3-3: Customizing Page Layouts

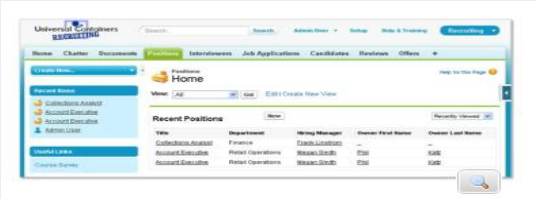


Task: Create a custom Position object.



Custom Tabs

- Custom Object Tabs
- Web Tabs
- Visualforce Tabs



Hands-on Exercise



View the hands on exercise steps in the **Building Applications with Force.com** “Building Your User Interface” Exercise Guide

https://lms.cfs-api.com/v1/content/3369d5e3-7116-4772-ad54-b90d9eace3bc/presentation_content/external_files/buildingyouruserinterfaceexerciseguide.pdf

Exercise 3-1: Creating a Custom Application

Exercise 3-2: Creating Custom Tabs

Exercise 3-3: Customizing Page Layouts

3-4: Enable Chatter on the Position Object

3-5: Create an Object-Specific Quick Action

3-6: Create a Global Quick Action and a Global Layout for HR



Task: Create a custom Position object.



A page layout controls the position and organization of the fields, sections, buttons and related lists that are visible to users when viewing or editing a record. Page layouts also help us control the visibility and editability of the fields on a record. We can set fields as read-only or hidden, and we can also control which fields require users to enter a value and which don't.



- Page layouts are powerful tools for creating a good experience for our users, but it's crucial that
- we remember one important rule: *page layouts should never be used to restrict access to sensitive*
- *data that a user shouldn't view or edit. Although we can hide a field from a page layout, users*
- can still access that field through other parts of the app, such as in reports or via the API.

Page Layouts



Page Layout defines the organization of:

- Fields.
- Custom links.

Page Layout customizations include:

- Field locations.
- Page section customizations.
- Field properties.

Home Chatter **Visualforce** Interviews Job Applications Candidates Reviews Offers

SW Engineer

Back to List | Custom Object Definitions

Customize Page | Edit Layout | Preview View | Help for this Page

Position Detail

Title: SW Engineer | Edit | Delete | Clone | Sharing | Owner: Admin User (Global) | Status: Open

Type: Engineering | Sub-status: None

Pay Grade: ENG-200 | Date Opened: 12/28/2010 10:55 PM

Hiring Manager: Bob Smith | Date Closed: None

Legacy Position Number: None

Description

Job Description: Build highly scalable web applications using Java and Oracle technologies. Write object oriented software in Java and database code in SQL.

Responsibilities: * help architect, extend and develop the quote and order management systems. * Resolve problems and optimize performance of complex web-based systems.

Created By: Admin User, 12/22/2010 10:55 PM | Last Modified By: Admin User, 12/28/2010 10:55 PM

Edit | Delete | Clone | Sharing




Establish unique layouts for different business scenarios. Use Visualforce pages to customize beyond the Salesforce look and feel.

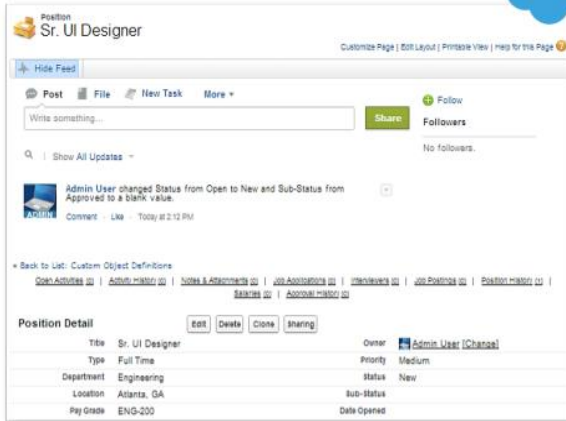


Adding Chatter To The Page Layout



- Enable Chatter to allow users to follow records and see updates on the records they follow.
- Configure what fields trigger a Chatter update.

CLICK PATH:  Setup | Customize | Chatter | Feed Tracking



Hands-on Exercise (Optional)



View the hands on exercise steps in the **Building Applications with Force.com** “Building Your User Interface” Exercise Guide

https://lms.cfs-api.com/v1/content/3369d5e3-7116-4772-ad54-b90d9eace3bc/presentation_content/external_files/buildingyouruserinterfaceexerciseguide.pdf

Exercise 3-1: Creating a Custom Application

Exercise 3-2: Creating Custom Tabs

Exercise 3-3: Customizing Page Layouts

Exercise 3-4: Enable Chatter on the Position Object

Exercise 3-5: Create an Object-Specific Quick Action

Exercise 3-6: Create a Global Quick Action and a Global Layout for HR



Task: Create a custom Position object.


Roll-Up Summary and Formula Fields

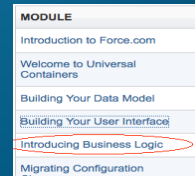


Video: Introducing Business Logic

This module introduces basic business logic functionality. Students will see how to create different formula fields. (16 min)

How to Get to this training video ?

- You need an **@partnertraining.com** account.
- To avoid a mixup with saved credentials open a private window in a new browsr.
- Browse to <http://help.salesforce.com> and log in with your @partnertraining.com account.
- Search for “Building Application with Force.com part 1”
- Make sure to select this training (pay attention to the video logo ):



- Select the module “Introducing Business Logic”:
- Enjoy the 16 min video.
- Direct Link: (only works after you’ve logged in with your @partnertraining.com account, paste in browser)
<https://help.salesforce.com/HTTrainingModulesDetail?courseId=a1S30000000gvGyEAI>



Formula Fields



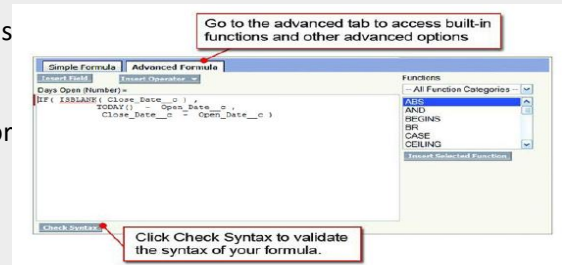
- Custom Formula Fields allow you to define calculations that reference other fields to display new numeric, text, or date values
- They are read-only, and do not display on record edit pages.
- Can reference fields on the same object, or a parent or lookup object.
- Cannot reference currency codes, description or custom long text area fields, or multi-select picklists.
- Are not searchable, or available for lead conversion or data exports.



Formulas



- A type of custom field. Formula fields automatically calculate their values based on the values of merge fields expressions, or other values.
- Use the Simple Formula tab for basic calculations involving numerical fields from the same object.
- Use the Advanced Formula tab for more complex calculations involving functions, non-numerical fields, or fields from parent objects
- A cross-object formula references fields from parent objects.
- Use the Insert Field browser on the Advanced Formula tab to access fields from up to 10 parent levels.



- Use cross object formulas to avoid duplicating data.

Creating Roll-Up Summary Fields



- Calculate values from a set of related records, such as those in a related list
- Are read-only fields that can display the sum, minimum, or maximum value or record count of a field in a related list
- Can be added for all custom master-detail relationships and for some standard relationships
- Can be created to automatically display a value on a master record based on the values of records in a detail record

The screenshot shows the 'Select Object to Summarize' configuration window. It includes a 'Master Object' dropdown set to 'Job Application' and a 'Summarized Object' dropdown set to 'Reviews'. Below this is the 'Select Roll-Up Type' section with radio buttons for COUNT, SUM (which is selected), MIN, and MAX. To the right of these is a 'Field to Aggregate' dropdown set to 'Overall Score'. At the bottom is the 'Filter Criteria' section with two radio buttons: 'All records should be included in the calculation' (selected) and 'Only records meeting certain criteria should be included in the calculation'.

Example: A custom account field called Total Invoice Amount displays the sum of invoice amounts for all related invoice custom object records in the Invoices related list on an account



Hands-on Exercise



View the hands on exercise steps in the **Building Applications with Force.com - Part 1**
"Introducing Business Logic" Exercise Guide

https://lms.cfs-api.com/v1/content/0c89551c-1c8d-444a-a483-d9dd491cb92b/presentation_content/external_files/introducingbusinesslogicexerciseguide.pdf

Exercise 4-1: Create Formula Fields

Exercise 4-2: Create Cross-Object Formulas

Exercise 4-3: Create Roll-Up Summary Fields



Task: Create a custom Position object.

The Salesforce logo, which consists of the word "salesforce" in white lowercase letters inside a light blue cloud shape.

salesforce

**Thank
you**