Hands-On Admin Workshop

Salesforce Fundamentals

Winter ‘20 Release

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Introduction & Setup

Welcome to the Salesforce Hands-on Admin Workshop! This guide will walk through all the modules covered in the guided classroom setting, includes extra credit activities, and will be valuable as a take-home activity for quick reference on administrative tasks.

The modules included in this guide will utilize the Salesforce platform to build a **camp management application**. Administrators will work in the Lightning User Experience to build and manage the app, learn how to create the right data model, apply logic and automation, as well as build a user interface that makes camp management an engaging experience.

Prerequisites

- No prior knowledge of Salesforce is required!
- To do this workshop, all you need is a modern browser and an Internet connection.
- Each student should have their own computer (a tablet may not work for all sections)
- An iPhone or Android phone is desirable, but not necessary

Browser Requirements

The following browsers are supported when working in the lightning experience (all at current version):

- Google Chrome (preferred)
- Mozilla Firefox
- Apple Safari
- Microsoft Edge
- Microsoft Internet Explorer (minimum version 11)

Module Order

This workshop guide is written to be completed in sequential order. Skipping modules may prevent completion if parts of the data model or logic are not completed. Any activities that are marked as ***Extra Credit*** can be skipped without impacting the remaining modules

Module A: Create your free Developer Account

This module will guide you through creating a Developer Edition account, and setting it up before building your application. Developer Edition instances are full-feature Salesforce environments that allow administrators and developers a playground to learn new skills, test their ideas, and develop in isolation from their main Salesforce environment.

IMPORTANT! Please DO NOT use your company's Salesforce environment for this workshop.

In addition to this workshop, you can use your Developer Edition account to access Trailhead, Salesforce's interactive and hands-on learning management website. Check out all the great things you can learn at https://trailhead.salesforce.com/. If you already have a Trailhead account, you can associate this new developer account to continue to accumulate badges.

Activity 1: Sign up for a new "Dev Org"

Open a browser and navigate to http://developer.salesforce.com/signup

Fill in the form provided:

- Enter your **first name** and **last name**
- Use an **email** address that you have access to during this workshop
- Create a **username** using this format: **firstname.lastname@workshop.hoaw** (Salesforce requires all usernames to be unique).
- **Accept** the Master Services Agreement checkbox

Check your email – you will receive an email from Salesforce asking you to verify your account
Upon verifying from the email link, you will be asked to create a password for this account. Once complete you should land on the setup page of Salesforce

Write down your username and password for this workshop:

Username: _____

Password (optional): _____

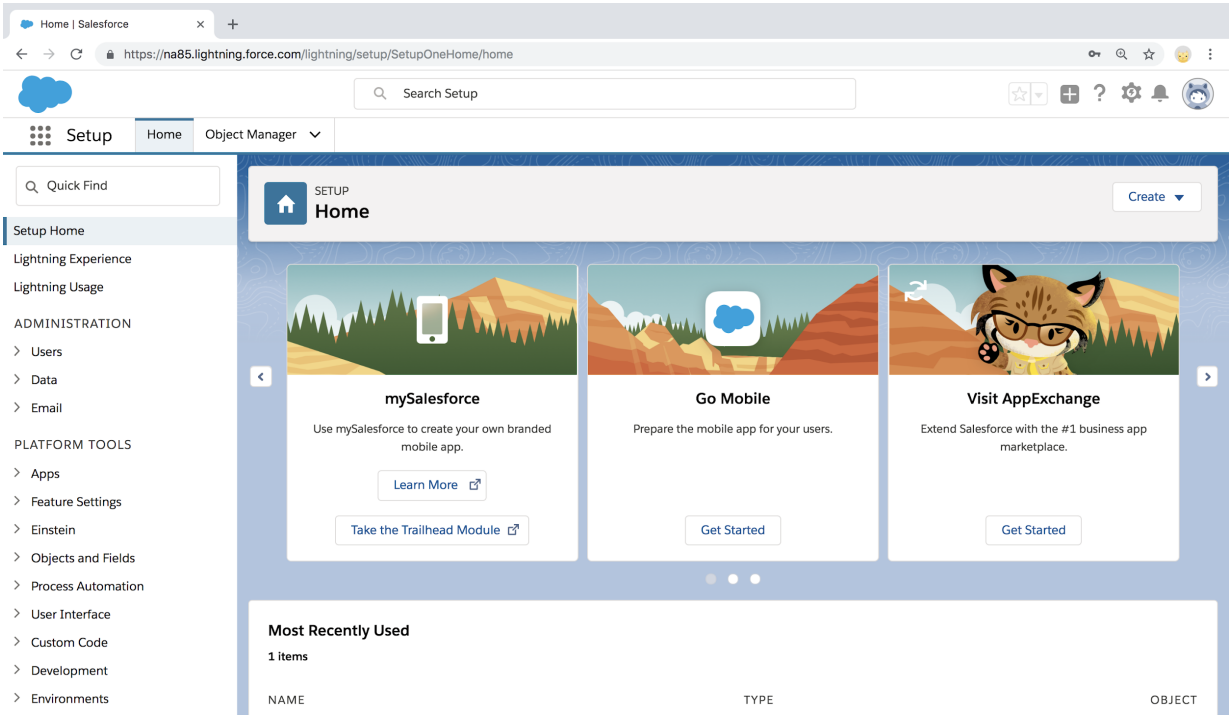
Congratulations! You have now created a Salesforce Developer Edition account! You will hear this referred to as an "org", "instance", and "environment", all meaning the same thing – your personal Salesforce playground! You will have access to this whenever you need, so long as there has been activity in the last six months. More information can be found at https://developer.salesforce.com/page/Developer_Edition.

Activity 2: Setting Your Domain

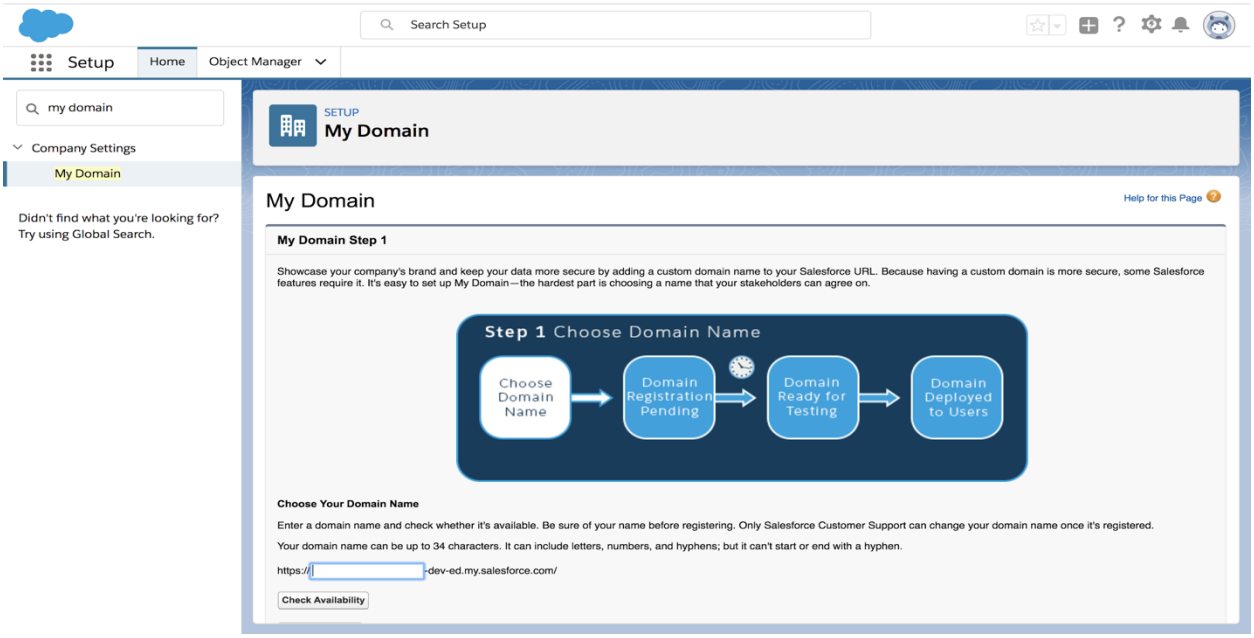
The first activity that you will do in your Salesforce org is setup the domain. With the Lightning Experience, Salesforce works best when given its own nickname.

TIP: You can find the **Setup** screen by 'cog' icon in the upper right hand corner at any time

1. Let's begin from the **Setup** screen:



2. In the Quick Find search bar (found at the top of the left navigation menu) start searching for **My Domain** and select the menu link:



3. For this workshop, use the format **firstname-lastname-hoaw**. Check that your domain name is available by clicking the **Check Availability** button
4. Once available, click **Register Domain**

The domain will take a few minutes to register. In the meantime, check out these resources:

- Trailhead – https://trailhead.salesforce.com
- Salesforce Admin Community – https://admin.salesforce.com
- Salesforce User Groups – https://success.salesforce.com/featuredGroups

5. Refresh your browser and the domain setup will be in Step 3.
6. Click on the **Log In** button (Note: if it asks to register your Mobile Number, click I *Don't Want to Register My Phone*)
7. Now that your screen has refreshed, you will notice your URL in your browser shows the domain you have created. Look on the page for the button Deploy to Users, and click it
8. Finally, click on the Setup button at the top of the page, and this will return you to the screen you started on.

Awesome! You are now ready to start building your camp management application. An application or **App** in Salesforce is comprised of a **data model**, **logic and automation**, **user interface**, and **reporting**.

Activity 3: Supporting Workshop Files

To support the workshop today, Salesforce has created a few resources to help you out. You will be able to find them on the GitHub page https://github.com/SalesforceCA/HOAW.

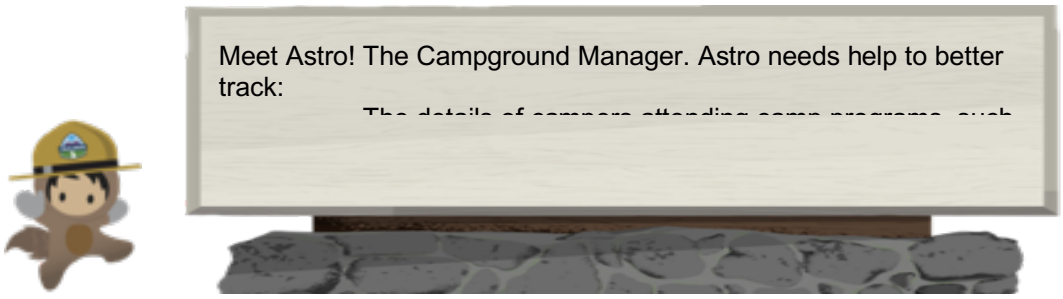
9. Open up the following link in your web browser: **https://github.com/SalesforceCA/HOAW**
10. Click **Clone or Download** and click **Download ZIP** (HOAW-Master.zip)
11. After downloading the zip file, make sure the zip file has been unzipped to an easily accessible location on your computer (e.g. your Desktop)

Module B: Creating the Data Model

Before you get started in building your data model, let's tackle a few concepts.
Think about all the data that surrounds a camp:

- Who are the campers that are attending?
- Who is organizing the camp? What activities are available?
- What details about a camp need to be tracked and updated?
- Who needs access to this information? How will they use it? How should they see it?

All these questions are rooted in how you set up your data model. That is why it is your first step in building your camp management application.



In Salesforce, you should think about data in three key structures: Objects, Fields, and Records.

- **Objects** – Salesforce uses objects to contain all information related to a subject. In the above statement, the subject is a **Camper**. All campers have similar attributes, and can be collected together and stored within that object in Salesforce.
- **Fields** – Salesforce uses fields to define the attributes and details about a subject. In the above statement, this would be **age**, **email**, **guardian**, and **allergies**. These attributes would be fields on the Camper object.
- **Records** – Salesforce uses records to identify instances of an object. Every camper might have a different combination of attributes, but would all be records in the Camper object.

Thought more commonly as a spreadsheet, an object is a table, fields are the columns in that table, and records are each row that is added to the table. This means that you can move any existing spreadsheet into Salesforce by creating the right data model to support it!

Now before you build a data model from scratch, it is always smart to see if someone has already built it. The Salesforce AppExchange is a marketplace of pre-built apps that can fit right into your Salesforce org, and get going towards your goal. Check out the AppExchange at https://appexchange.salesforce.com/.

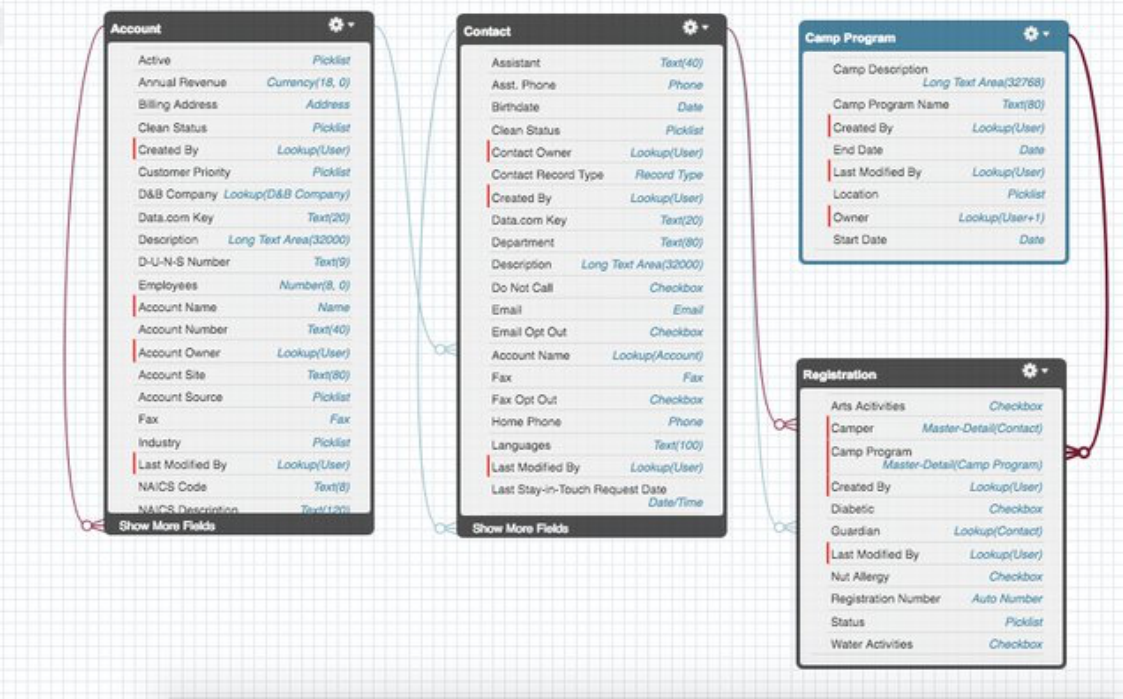
Let's Get Started!

Before you start building your data model, you will want to start with the end in mind – what insights will you get from the data. Camp managers have been asking for three key insights:

- **Staff Planning** – how should the camp make hiring decisions based on the campers registered?
- **Supply Planning** – how many supplies are needed to support camp activities?
- **Safety** – who are the key campers that camp managers should key an eye on?

Additionally, camp managers have been asking for a more automated process for handling campers with nut allergies. You will want to help with this objective as well!

The following image shows the objects and fields that you are going to use today:



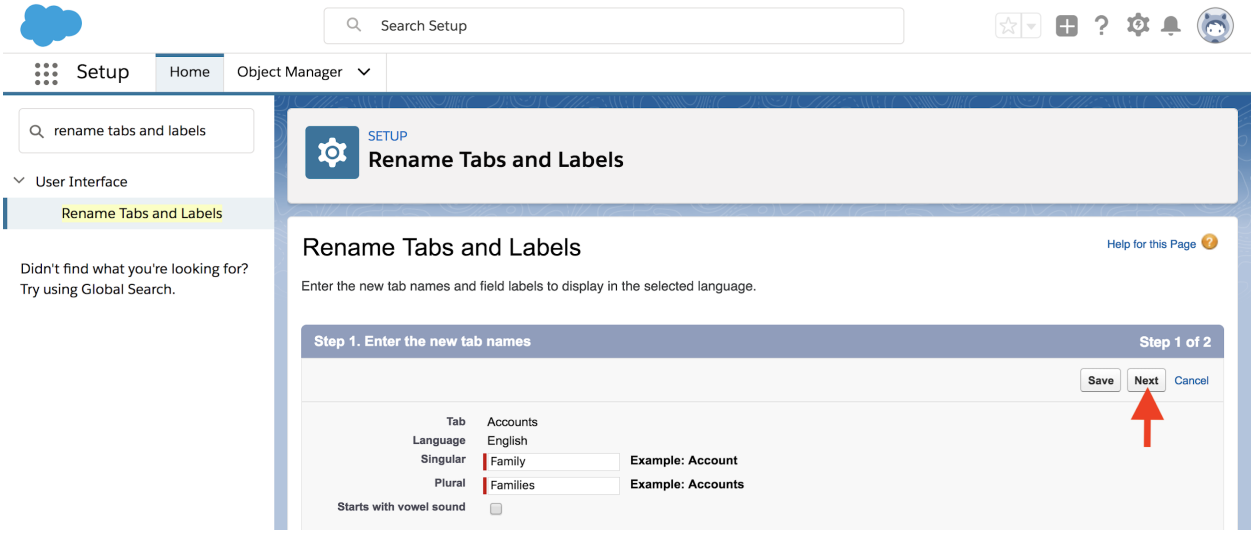
- **Contacts -** To track your campers and their guardians
- **Accounts -** To connect Contacts belonging to the same family
- **Camp Programs –** To track details about the multiple camps that will run each summer
- **Registration -** The campers will be connected to a Camp Program through a Registration

Activity 1: Modify the Account and Contact objects

Rename Tabs and Labels

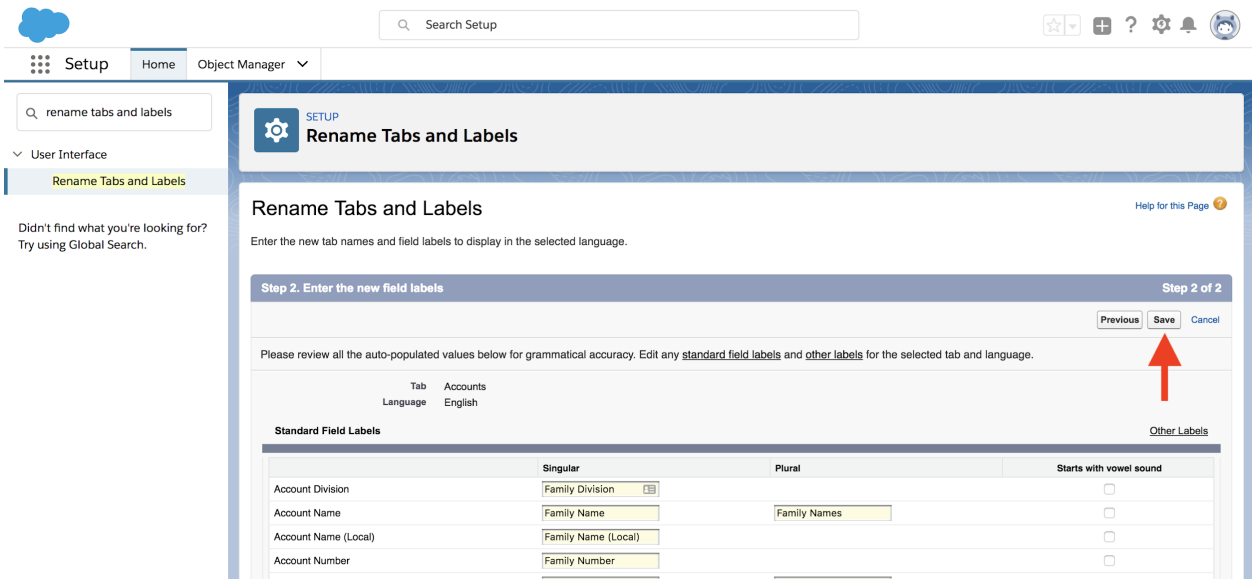
Starting on your setup screen, you are going to first change the standard label for Account to Family. This will ensure that users of the application see the right information relevant to their use case.

1. In the Quick Find search in the left navigation, start searching for **Rename**, and select the menu link for **Rename Tabs and Labels**
2. Click on the **Edit** button beside the Accounts row
3. Rename the singular name to **Family**
4. Rename the plural name to **Families**
5. Deselect the checkbox for **Starts with vowel sound** and press **Next** (this helps us identify if we should refer to it as a Family or an Family)



IMPORTANT: Click **Next** (not **Save**!) to see that all fields related to Account have changed to Family

6. Once you've confirmed all the fields related to account have changed to "family", on the next screen, click **Save**



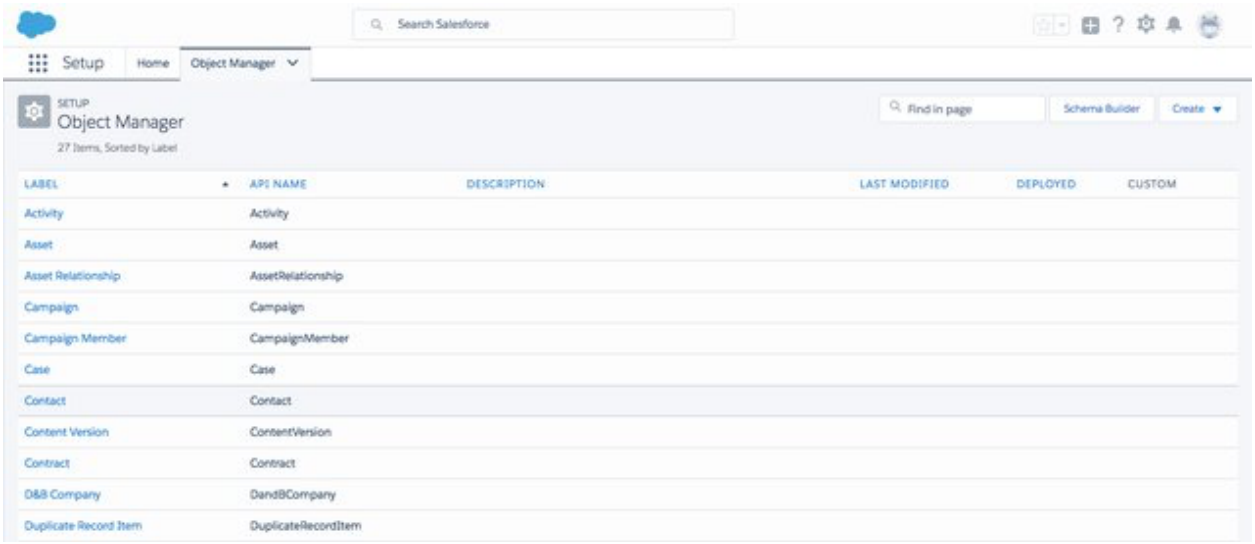
You have now changed the label of the standard Account object to be Family.

Create Record Types

Now, let's modify your Contact object to track both Campers and Guardians. To do this, you are going to create **record types** for this object.

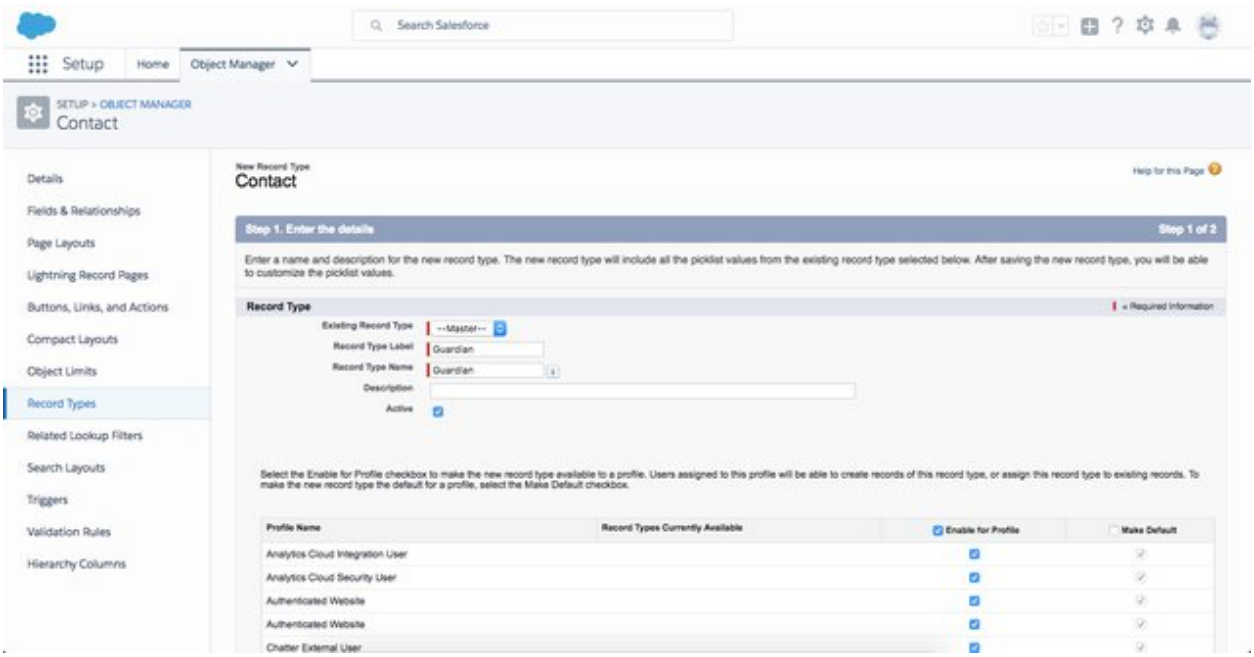
A record type allows us to use the same Salesforce object for different purposes. You may track different attributes about a guardian than you would a camper, but still maintain some common attributes. Instead of creating a custom object for both, record types allow you to use the same object, and assign different page layouts, different processes, and even different picklist values to each.

1. Click on the **Object Manager** tab at the top of the screen
2. Within Object Manager, find the **Contact** object, and click on the label link



3. In the left navigation, click on the menu item **Record Types**

4. Click the **New** button
5. Set the record type label to **Guardian** and hit the tab key
6. The record type name should autofill. If it doesn't, set the name to Guardian
7. Confirm the checkbox for **Active** is selected and check **Enable for Profile** in the table header to enable the record type for all profiles.

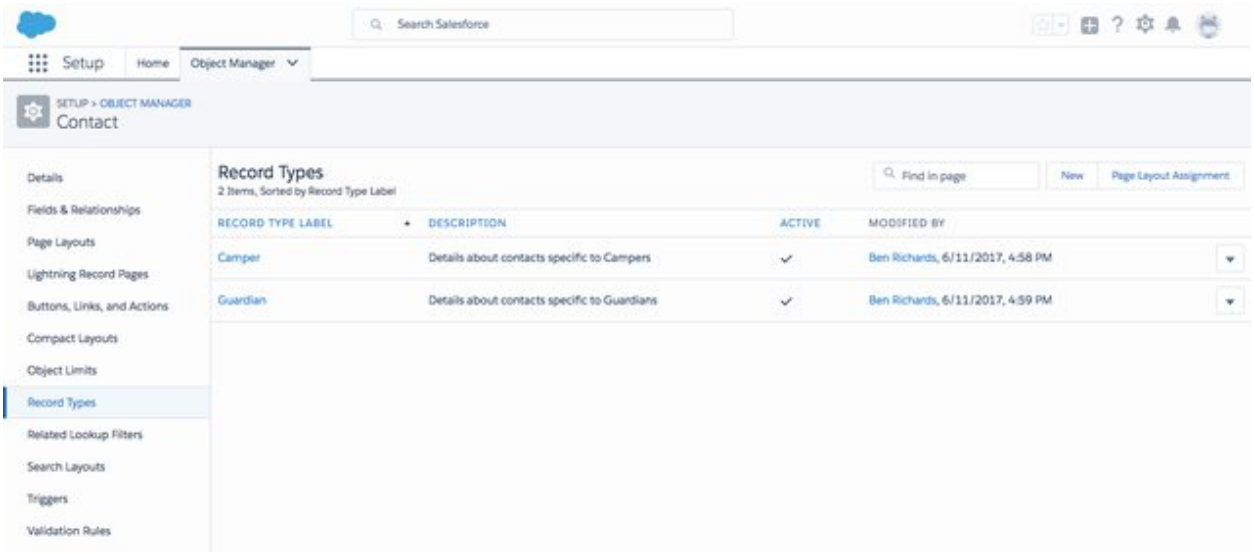


8. At the bottom of the page, click **Next**
9. Set the page layout for this record type to **Contact Layout**
10. At the bottom of the page, select **Save and New**

Now let's repeat those steps and create a record type for **Camper**

11. Set the label to **Camper** and hit the tab key
12. The name field should autofill. If it doesn't, set the name to **Camper**
13. Click the checkbox to **Active**
14. Ensure that the **Enable for Profile** checkbox in the header is checked.
15. At the bottom of the page, click **Next**
16. Set the page layout for this record type to **Contact Layout**
17. At the bottom of the page, select **Save**

To review the record types that have been created, on the left navigation click on the menu item **Record Types**. You should now see both record types created and active.



Now that you have modified the Account and Contact objects for use in your application, it is time to build a few custom objects to track information about the camp programs and registrations.

You may be asking, why did you use the account and contact objects instead of creating custom objects? Savvy Salesforce administrators will try to use standard functionality and objects as much as possible. It saves time from rebuilding a data model from scratch.

For example, there is an existing relationship between accounts and contacts, meaning that a Camper and a Guardian can belong to a Family. If you build this with custom objects, you would also have to rebuild this standard relationship, and the security model that surrounds it.

Activity 2: Create the Camp Program object and tab

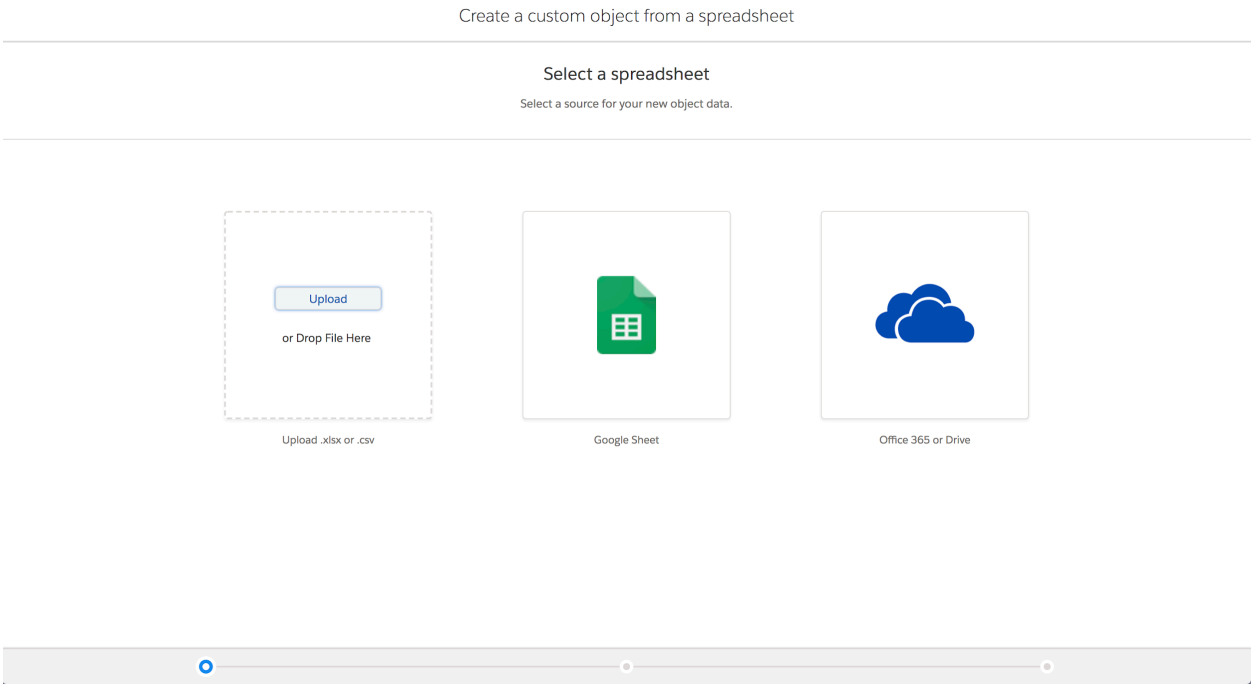
Create a Custom Object & Tab

When thinking about your camp management application, you will want to think about dependencies. For example, camp registrations require us to know what camp program it is related to. If you haven't created a way to track the camp programs, then you can't create the registration.

The same concept applies when designing the data model. You need to build your Camp Program object before your Registrations object, so it exists when you want to create a relationship.

Let's build our custom object by starting with your data on spreadsheet. Creating custom objects in Salesforce have never been faster!

1. In Setup, click on the **Object Manager** tab at the top of the screen
2. Click on the **Create** button in the top right of the screen and select **Custom Object From Spreadsheet**
    a. Click **Log in with Salesforce** - You might need to log into Salesforce again. Enter your credentials using the username and password you created earlier. Hint: If you used the suggested format, your username will look a bit like this: **firstname.lastname@workshop.hoaw**
    b. Click **Allow** access
    c. Click the **Upload** button and upload the **CampPrograms_Sample.csv** from your HOAW_Master folder.

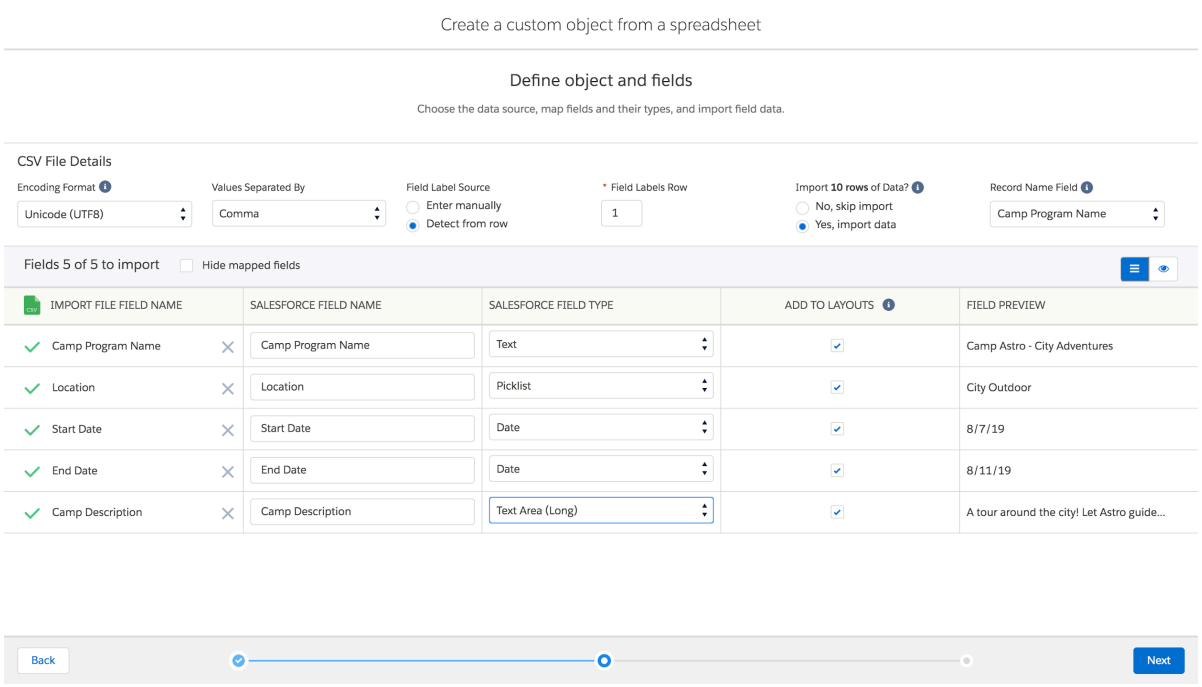


On the **Define object and fields** page we will need to make some adjustments to ensure the data is entered correctly:

1. For the **Record Name Field** picklist in the top right of the page, select **Camp Program Name**

IMPORTANT: Make sure you complete Step 1. It's important to ensure this step is completed correctly to avoid errors when we upload more data later on.

2. Change the **Location** field to a **Picklist** field type
3. Change the **Camp Description** field type to **Text Area (Long)**
4. Click **Next**
5. Change Label to **Camp Program**
6. Change Plural Label to **Camp Programs**
7. Under **Advanced Settings**, make sure all the items are checked and then click **Finish**

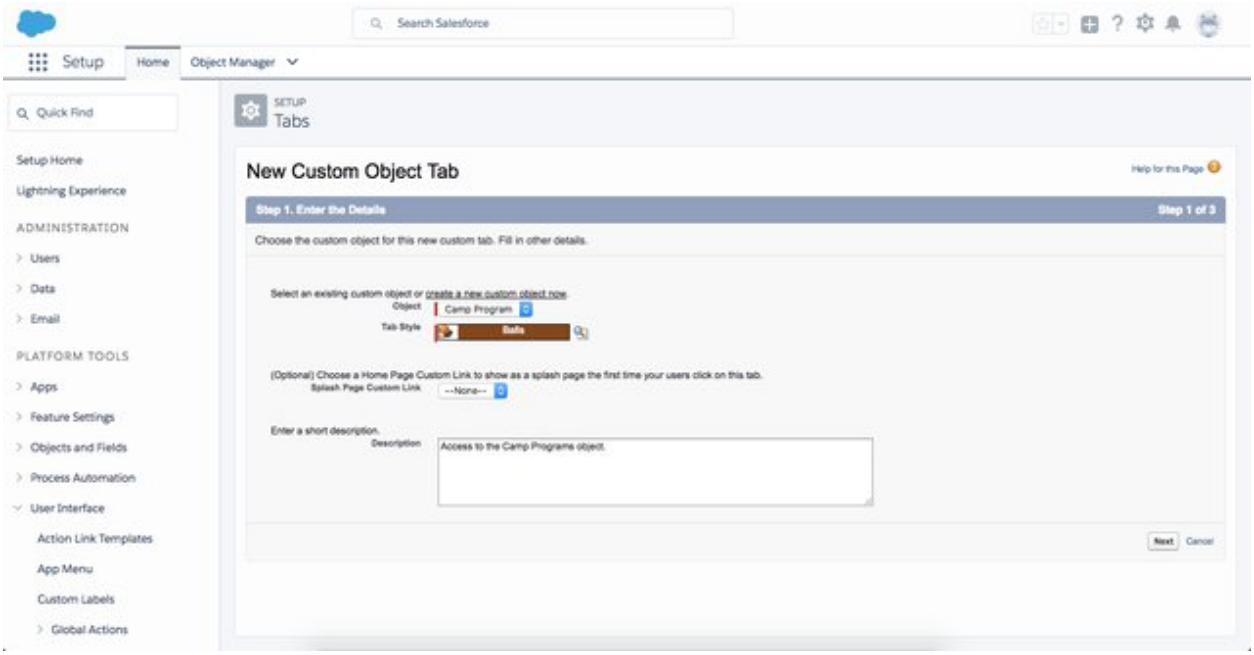


Nice Work! Your Camp Program object should now be created. If you have a lot of fields you want to create, using the spreadsheet method saves a LOT of time and it also imports your data for you.

Now that we've created our custom object, we want to make a few adjustments to the object to get it looking right. First let's edit the **Tab** for the **Camp Program** object.

1. Go to **Setup** and click on the **Home** tab.

2. In the Quick Find search in the left navigation, type **Tabs**
3. Notice that Camp Programs is listed under the Custom Object Tabs section. Click **Edit.**
4. Choose a **Tab Style** that fits best for your camp. This will be used as an icon to represent your object to end users and click **Save**



Next, let's fix the **Location** field and the order of the values in the picklist.

1. Go to **Object Manager** and search **Camp Program**
2. Select **Fields and Relationships** from the menu on the left
3. Click on the link for **Location**
4. Click the **Reorder** button
5. At the bottom, select the checkbox for **Display values alphabetically, not in the order entered**

Lastly, let's create some space on the page and reduce the number of visible lines for the **Camp Description** field.

1. On the left panel, select **Fields & Relationships**
2. Click on the **Camp Description** link
3. Click the **Edit** button
4. Change the **# Visible Lines** to 3
5. Click **Save**

Activity 3: Create a Registration Object and Tab

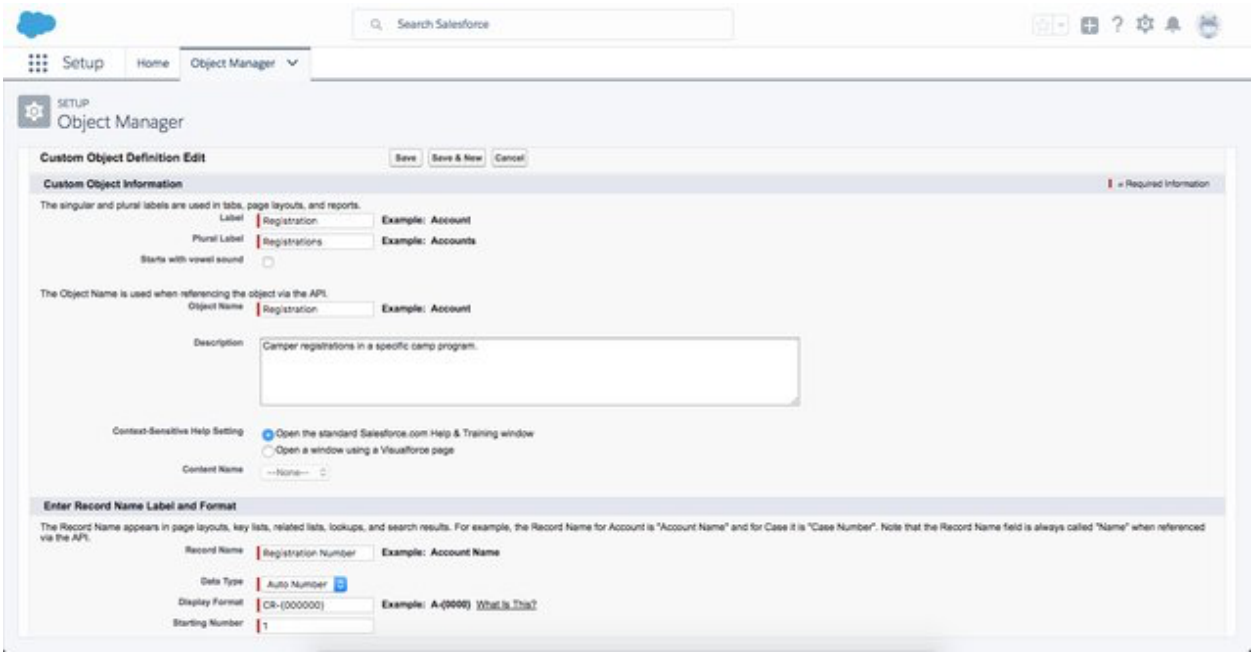
Before jumping in and creating the Registrations object, let's think about how this object will be used. Each registration is the connection between a Camper and a Camp Program. When you define the relationships between these objects, think about the nature of those relationships.

- Can a camper be registered in more than one camp program?
- Should a camp program have more than one registered student?

If the answers to both are YES!, then you are creating a **junction object**, effectively a many-to-many relationship between campers and camp programs.

This time, we won't create the Registration object from a spreadsheet - we'll go through to create the fields and relationships before loading data in.

1. Click on the **Object Manager** tab at the top of the screen
2. On the top right, click **Create** and select **Custom Object**
    a. Set the custom object label to **Registration** and hit the tab key
    b. Set the plural label to **Registrations**
    c. Set the record name to **Registration Number**, with data type **Auto Number**
    d. Set the display format to **CR-{000000}**
    e. Set the starting number to **1**



3. Click all the checkboxes in each section **Optional Features**, **Search Status**, and **Object Creation** Options

IMPORTANT: Ensure that you have the **Launch New Custom Tab Wizard** checkbox clicked. This will allow you to edit the **Tab Style.**

4. Click **Save**
5. Choose a **Tab Style** that fits best for your camp. This will be used as the icon to represent your object to end users, click **Next**
6. Confirm the tab is **Default On** for all profiles, and click **Next**
7. Deselect the checkbox in the table header for **Include Tab**. You do not want to add this object and tab to existing apps in Salesforce, as you are building a new app.
8. Click **Save**

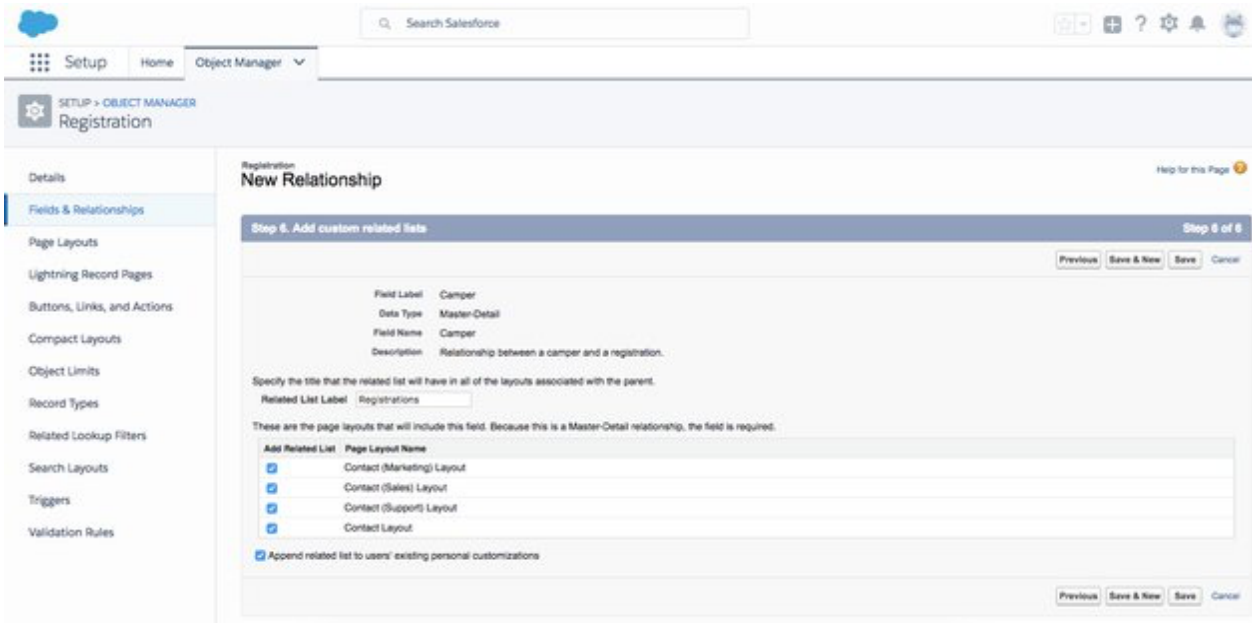
Creating the Master-Detail Relationships

When thinking about relationships, you also want to think about whether a registration can exist without a camper or a camp program. If the answer is no, then you should create the relationship as **master-detail**.

This means that a registration cannot exist without an assigned camper, and without a specified camp program. When adding fields, let's start with building the right relationships.

1. Go back to **Object Manager>Registration.** In the left navigation, click on the menu item **Fields and Relationships**
2. Click on the **New** button to create a new custom field
3. Create a **Camper** relationship field:
    a. Select the Data Type **Master-Detail Relationship**, and click **Next**
    b. Relate to the **Contact** object
    c. Set the label to **Camper,** and press tab to automatically set the name to **Camper**
    d. Set the child relationship Name to **Registrations** and click **Next**
    e. Review the profiles who will be able to see this field and click **Next**
    f. Confirm the field will be added to the **Registrations Layout**, and click **Next**

g. Set the related list label to **Registrations**, add related list to all layouts, and click **Save and New**



4. Create a **Camp Program** relationship field:
    a. Select the Data Type **Master-Detail Relationship**, and click **Next**
    b. Relate to the **Camp Program**
    c. Set the label to **Camp Program,** and press tab to automatically set the name to **Camp Program**
    d. Set the child relationship Name to **Registrations** and **Next**
    e. Review the profiles who will be able to see this field and click **Next**
    f. Confirm the field will be added to the **Registrations Layout**, and click **Next**
    g. Set the related list label to **Registrations**, add related list to all layouts, and click **Save and New**

Now, let's create a Lookup Relationship

A lookup relationship works similar to a master-detail. You can lookup and select a value from a related object. The difference is, a lookup value is not always required.

That is, we can create a Guardian lookup field on the Registration and a value is not required to save the record.

5. Create a **Guardian** relationship field:
    a. Select the Data Type **Lookup Relationship**, and click **Next**
    b. Relate to the **Contact** object
    c. Set the label to **Guardian,** and press tab to automatically set the name to **Guardian**
    d. Set the child relationship Name to **Guardianship** and click **Next**
    e. Review the profiles who will be able to see this field and click **Next**
    f. Confirm the field will be added to the **Registrations Layout**, and click **Next**

g. Set the related list label to **Family Registrations**, add related list to all layouts, and click **Save and New**

You have now set up three relationships, including two to the same object. Salesforce allows us to create a maximum of **2 master-detail relationships** on an object, and then as many lookup relationships as required (up to 40 but more can be requested). Let's finish the registration object with a few more fields.

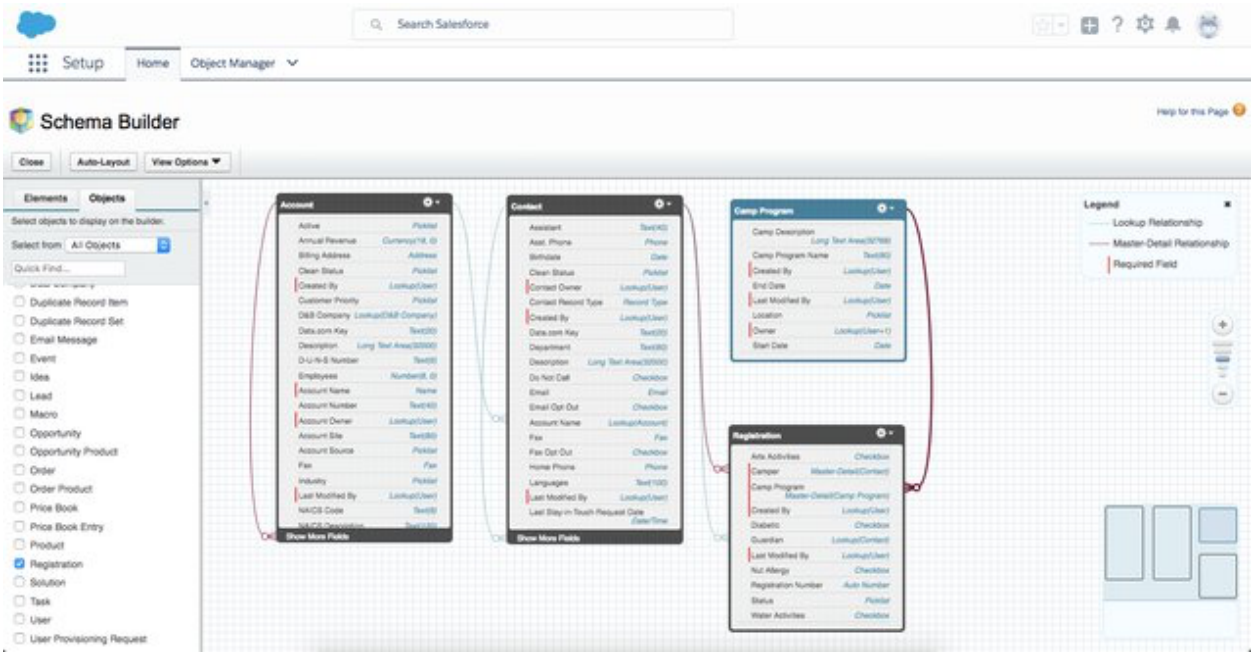
1. Create a **Status** field:
    a. Select the Data Type **Picklist,** and click **Next**
    b. Set the label to **Status**
    c. Select the radio button for Enter values, with each value separated by a new line
    d. Enter the following values (each on its own row)
        i. Registered
        ii. At Camp
        iii. Completed
        iv. Withdrew
    e. Select **Use first value as default value**
    f. Set the name to **Status** and click **Next**
    g. Review the profiles who will be able to see this field and click **Next**
    h. Confirm the field will be added to the **Registration Layout**, and click **Save and New**
2. Create a **Nut Allergy** field:
    a. Select the Data Type **Checkbox**
    b. Set the label to **Nut Allergy** and press tab to automatically set the name to **Nut_Allergy**
    c. Set the default value to **Unchecked**, and click **Next**
    d. Review the profiles who will be able to see this field and click **Next**
    e. Confirm the field will be added to the **Registration Layout**, and click **Save and New**
3. Create a **Diabetic** field:
    a. Select the Data Type **Checkbox**
    b. Set the label to **Diabetic,** and press tab to automatically set the name to **Diabetic**
    c. Set the default value to **Unchecked** and click **Next**
    d. Review the profiles who will be able to see this field and click **Next**
    e. Confirm the field will be added to the **Registration Layout**, and click **Save and New**
4. Create a **Water Activities** field:
    a. Select the Data Type **Checkbox**
    b. Set the label to **Water Activities,** and press tab to automatically set the name to **Water_Activities**
    c. Set the default value to **Unchecked** and click **Next**
    d. Review the profiles who will be able to see this field and click **Next**
    e. Confirm the field will be added to the **Registration Layout**, and click **Save and New**
5. Create an **Arts Activities** field
    a. Select the Data Type **Checkbox**

b. Set the label to **Arts Activities**, and press tab to automatically set the name to **Arts_Activities**
c. Set the default value to **Unchecked**, and click **Next**
d. Review the profiles who will be able to see this field and click **Next**
e. Confirm the field will be added to the **Registration Layout**, and click **Save**

Activity 4: Examine the Data Model in Schema Builder

Now that you have completed adding your fields to your registration object, let's look at how your data model has turned out. The best view is to look at the data schema.

1. Click on the **Home** tab at the top of the screen
2. In the Quick Find search in the left navigation, start typing **Schema**, and click on the **Schema Builder** menu item
3. In the left navigation of Schema Builder, click the **Clear All** link
4. Select the four objects that you are using in your app: **Account**, **Contact**, **Camp Program**, and **Registration**
5. Use the mini-map in the bottom right to navigate and organize your page to show all the objects and their relationships with each other



Excellent! You have now completed building your data model for your application. With your data model, you will now be able to create logic, automation, reporting, and a user experience to complete your app.

Extra Credit Activity: Roll-up Summary Field and Formula Field

One of the unique attributes of a master-detail relationship is the ability to roll-up summary information from a detail object to the master object. Wouldn't it be great if when you looked at a Camp Program, you could see a count of how many registrations there are against it? Well with a roll-up summary field, you can do just that.

1. In Schema Builder, click on the **Elements** tab of the left navigation
2. Drag and drop a Roll-up Summary field onto the **Camp Program** object
3. Set the label to **Registered Campers,** and press tab to automatically set the name to **Registered_Campers**
4. Choose the **Registrations** object as the summarized object
5. Choose **COUNT** as the summary type
6. Click **Save**

Now every time a new camper is registered to this camp program, the count will increase automatically. Let's take this one step further. What if you wanted a visual indicator of whether there are spots remaining in this camp program? Well you can use a formula field to be able to show this.

1. In Schema Builder, click on the **Elements** tab of the left navigation
2. Drag and drop a Formula field onto the **Camp Program** object
    a. Set the label to **Availability**
    b. Set the name to **Availability**
    c. Set the return type to **Text**
    d. In the formula box, enter the following formula:

    IF (Registered_Campers__c > 25, IMAGE ("/img/samples/light_red.gif", "Red"), IMAGE ("/img/samples/light_green.gif", "Green"))

3. Select checkbox for **Treat blank fields as zeroes**
4. Click **Save**

You have now added a visual indicator for availability to the Camp Program object, that looks at your roll-up summary field to determine its value. Way to go!

Module C: Designing the App Experience

Now that you have the data model in place, it is time to think about how users are going to interact with the data:

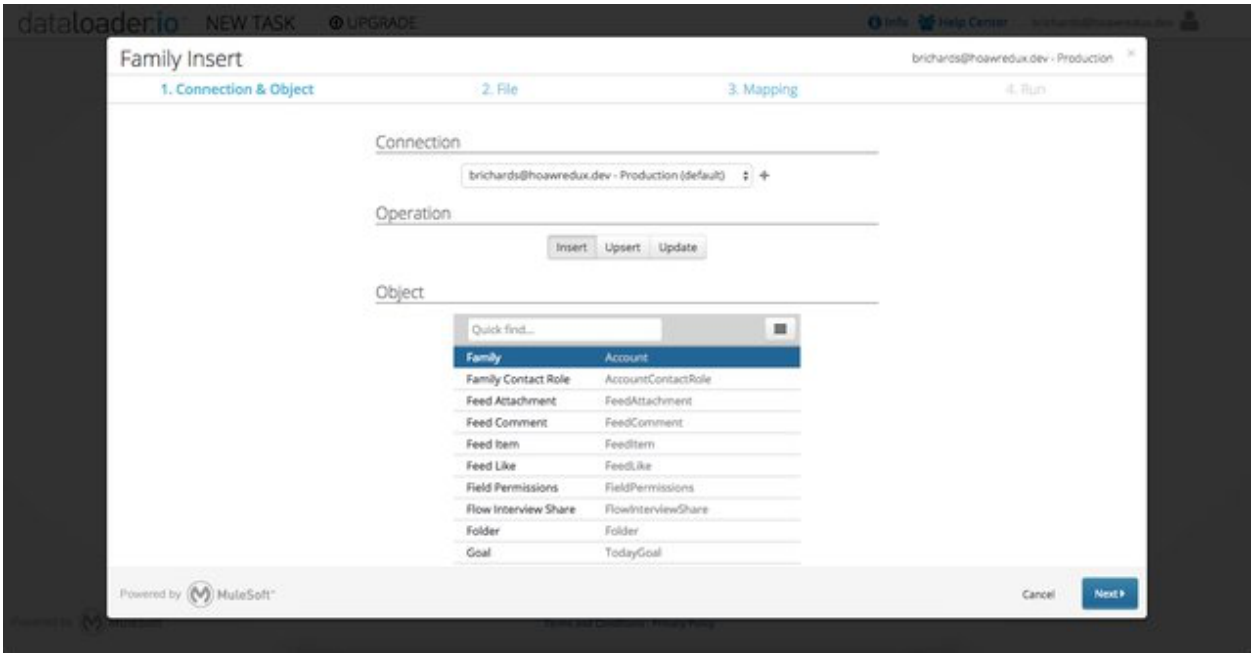
- Where are users accessing the data? Web browser? Mobile?
- Will users collaborate on records?
- What information is crucial for users to see first?

These questions are answered when you create a user experience dedicated to your camp management application. Let's start designing your app!

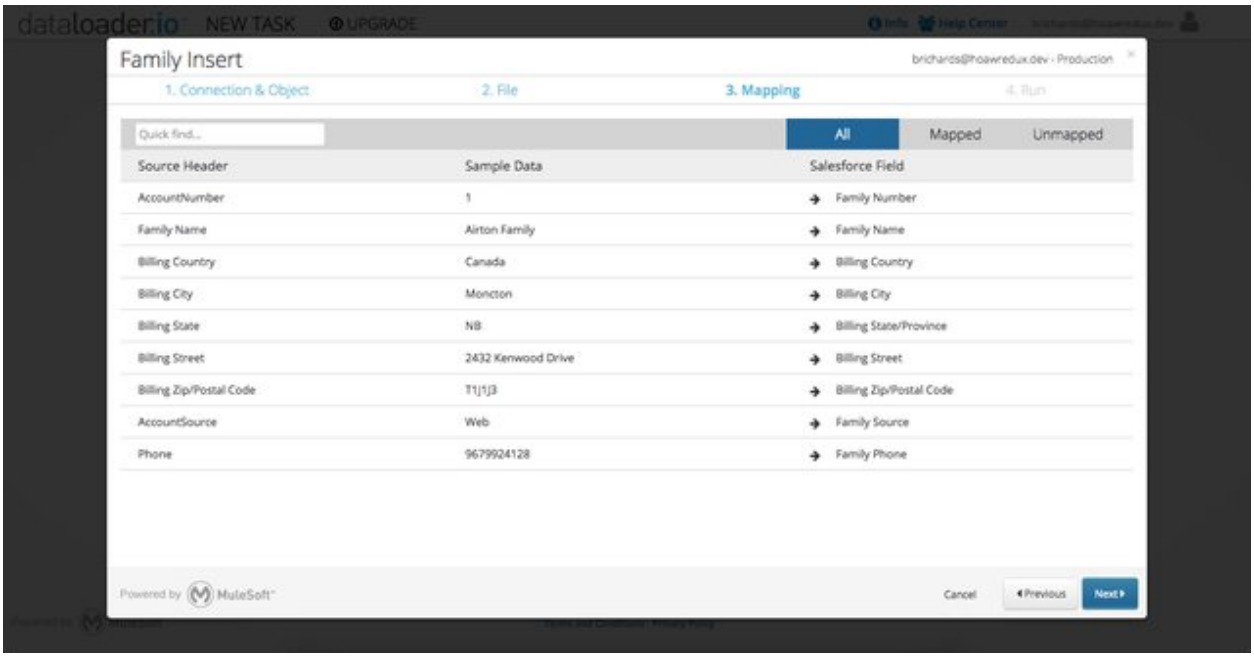
Activity 1: Load Sample Data for Camp Management Application

Before you can start to effectively shape the user experience, you need some data to work with. Luckily you don't have to manually create data, some is provided for you.

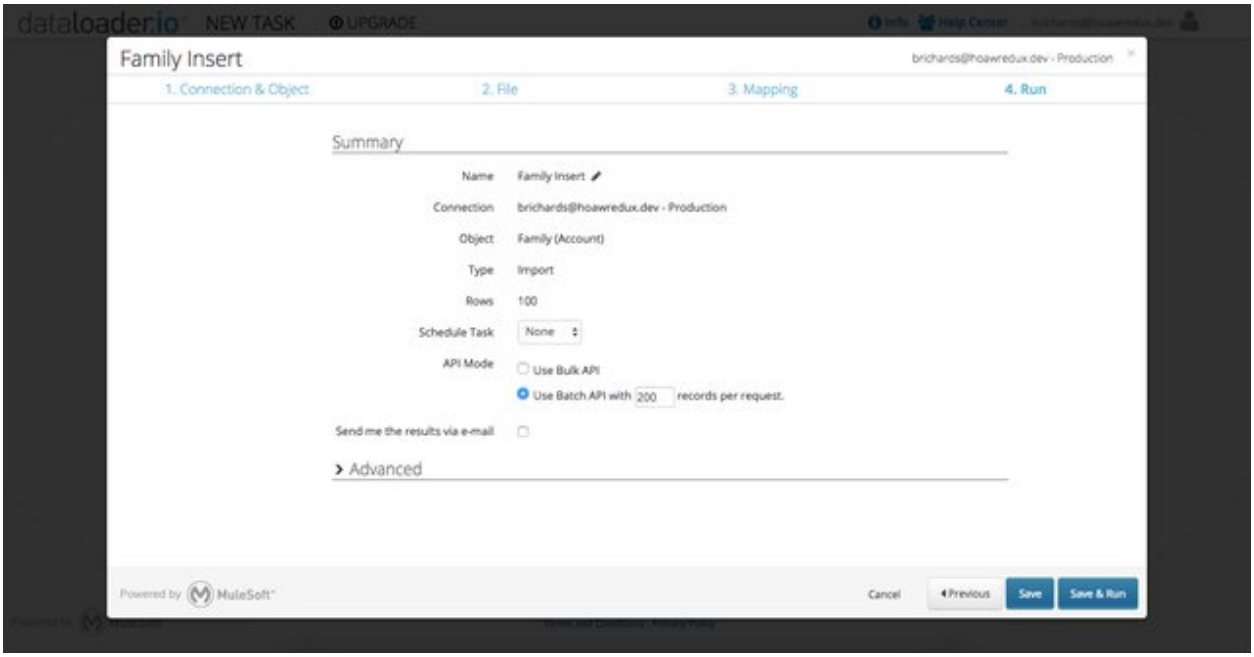
1. In the same browser as your Salesforce Developer Edition org, open a tab and navigate to **https://dataloader.io/**
2. Click **Login with Salesforce** at the top of the page and click **Log In**
3. Click **Allow** to allow access to your environment
4. Import data about Campground **Families** into Salesforce
    a. At the top of the page, click **New Task**>**Import**
    b. Choose the Operation **Insert**
    c. Search for and select the object **Family** and click **Next**



    d. From the **HOAW-Master.zip** file you downloaded locate and upload the **Families_Sample.csv** file
    e. **Confirm all fields are mapped** and then click **Next**



f. Select API Mode **Batch API** with **200** records per request

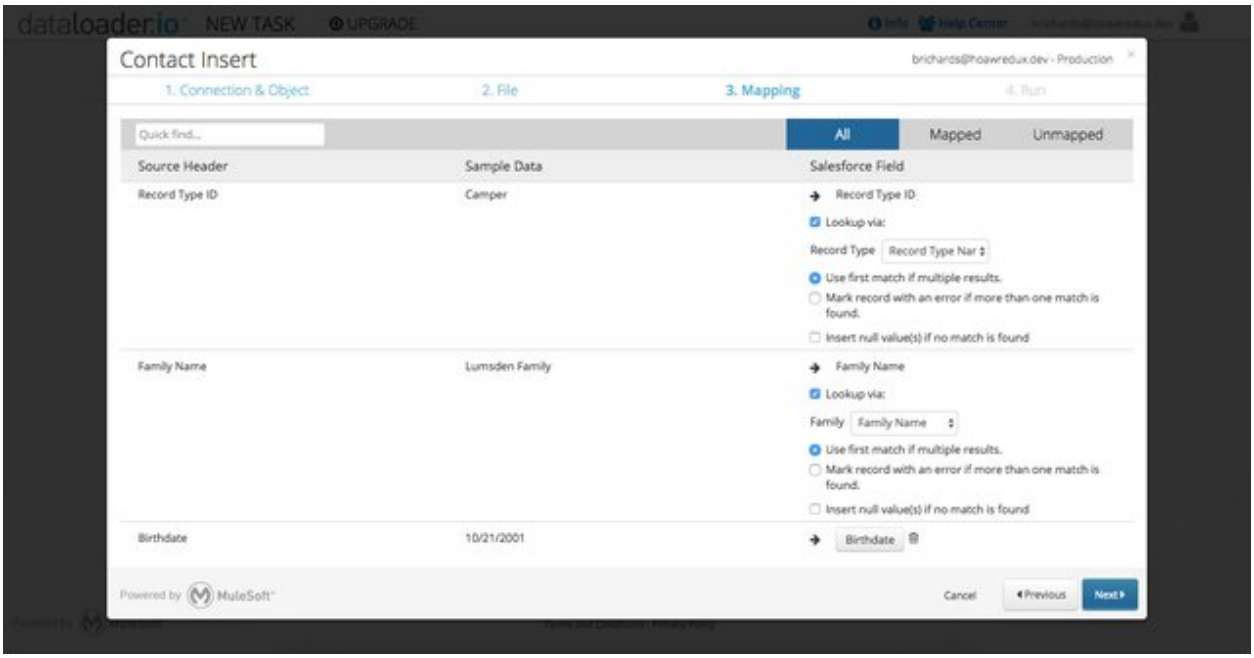


g. Click **Save & Run,** then **Run** again

5. Next, we will import **Contacts** into Salesforce
   a. At the top of the page, click **New Task**>**Import**
   b. Choose the Operation **Insert**
   c. Search for and select the object **Contact** and click **Next**
   d. From the **HOAW-Master.zip** file you downloaded locate and upload **Contacts_Sample.csv**
   e. For the **Record Type ID** field, Select the checkbox for **Lookup Via** and choose **Record Type Name** from the dropdown

f. For the **Family Name** field, Select the checkbox for **Lookup Via** and choose **Family Name** from the dropdown

g. **Confirm all fields are mapped,** click **Next**



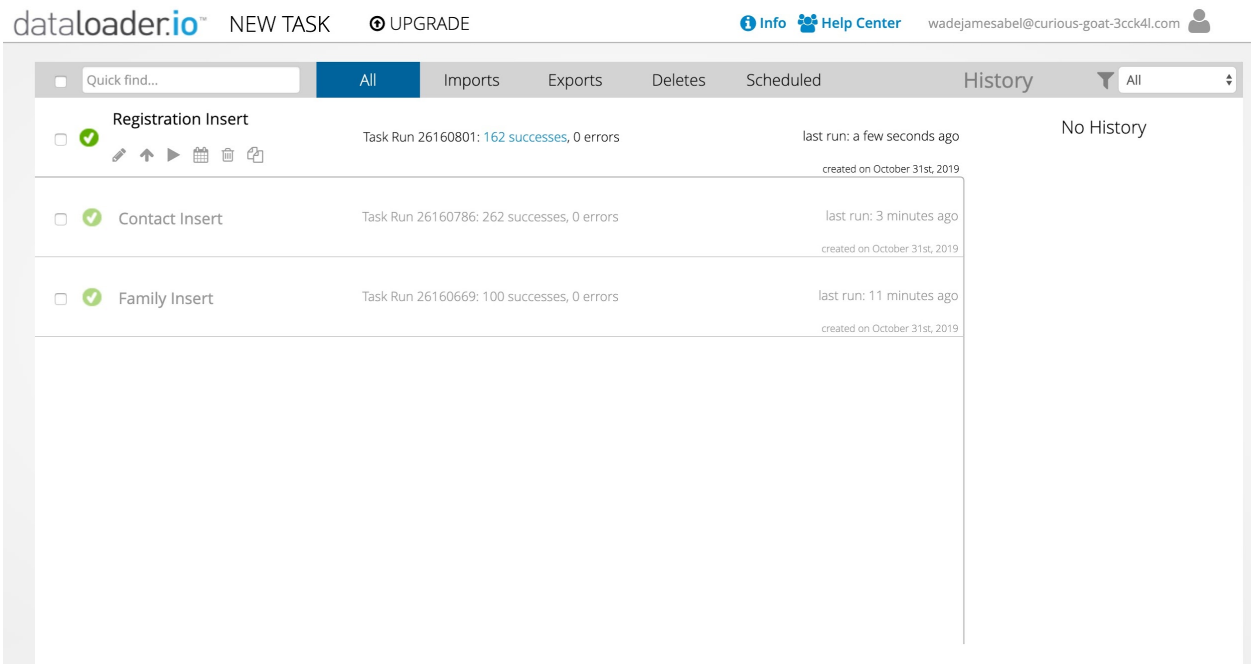
h. Select API Mode **Batch API** with **200** records per request

i. Click **Save & Run, Run.**

6. Import **Registrations** into Salesforce
    a. Click **New Task** and **Import** from at the top of the page
    b. Choose the Operation **Insert**
    c. Search for and select the object **Registration** and click **Next**
    d. From the HOAW-Master.zip file you downloaded locate and upload the **Registrations_Sample.csv** file
    e. For the **Camp Program** field, Select the checkbox for **Lookup Via** and choose **Camp Program Name** from the dropdown
    f. For the **Camper** field, Select the checkbox for **Lookup Via** and choose **Full Name** from the dropdown
    g. For the **Guardian** field, Select the checkbox for **Lookup Via** and choose **Full Name** from the dropdown
    h. Confirm all fields are mapped, click **Next**
    i. Select API Mode **Batch API** with **200** records per request
    j. Click **Save & Run, Run.**

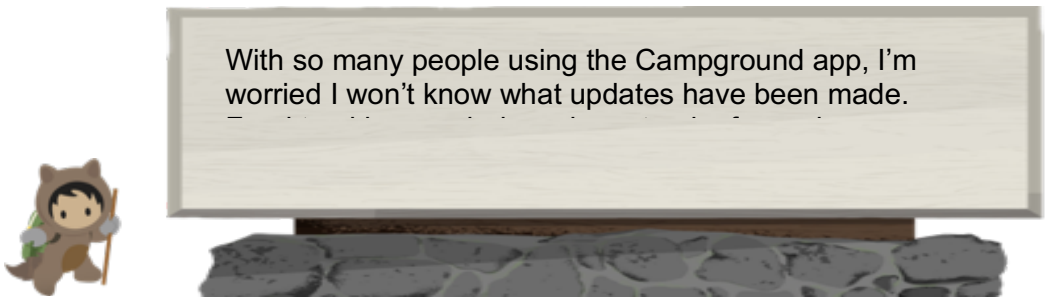
If you see any errors, check the spreadsheet for the errors to see what has gone wrong. This might have occurred if record types were not created, fields not renamed or mispelled.

Once you've finished, it should look like this:



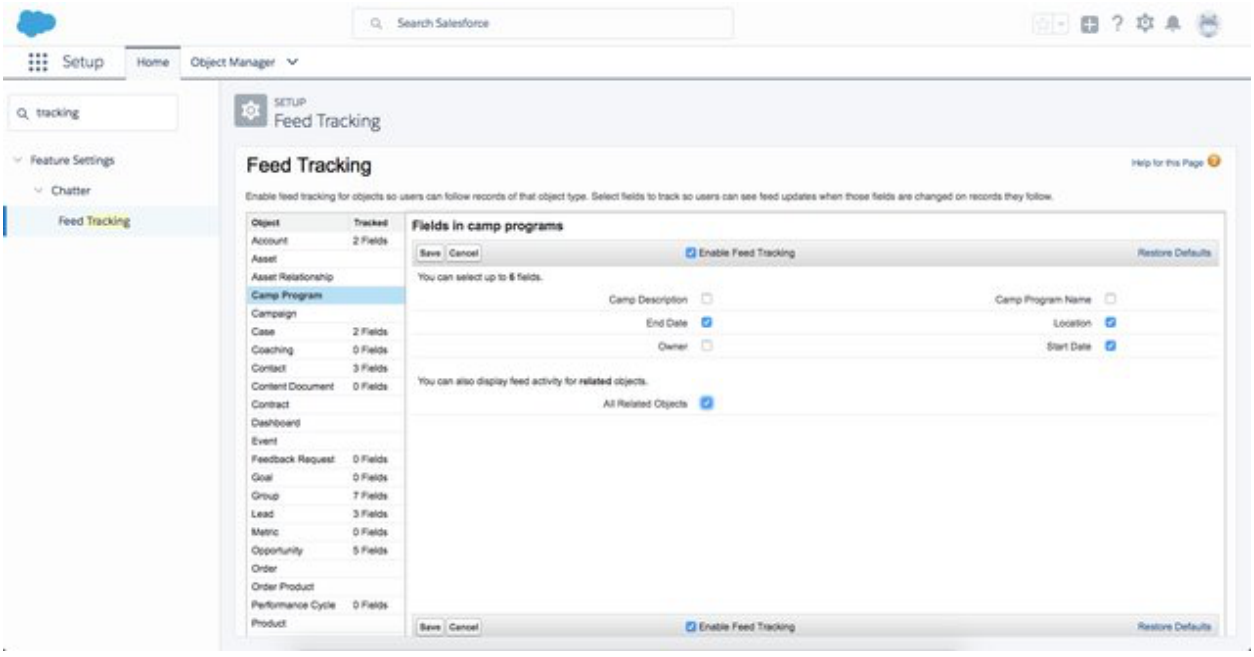
Congratulations, you have now uploaded in data that you can use when designing your app!

Activity 2: Enabling Feed Tracking



Salesforce feed tracking allows users to see when specific fields on a record have changed, as well as collaborate using Chatter.

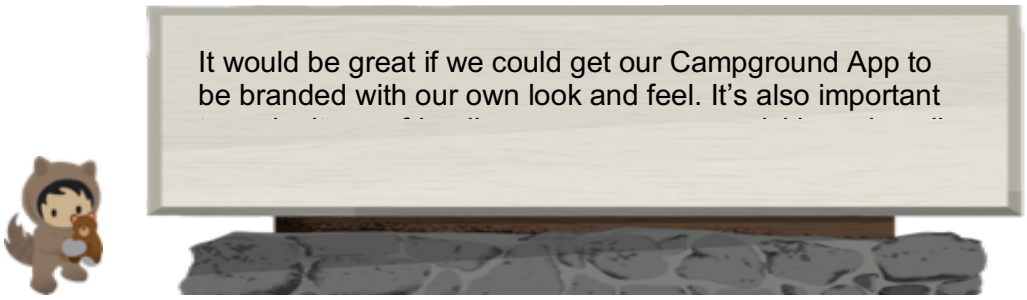
1. In **Setup,** click on the **Home** tab at the top of the screen
2. In the Quick Find search in the left navigation, start typing **Tracking**, and click on the **Feed Tracking** menu item
3. Enable Feed Tracking for Camp Programs
    a. Select the **Camp Program** object from the left column
    b. Select the checkbox for **Enable Feed Tracking**
    c. Select the checkbox for the fields **Start Date**, **End Date**, **Location**, and **All Related Objects** and click **Save**



4. Enable Feed Tracking for **Registrations**
    a. Select the **Registration** object from the left column
    b. Select the checkbox for **Enable Feed Tracking**
    c. Select the checkbox for the fields **Status** and **Nut Allergy** and click **Save**

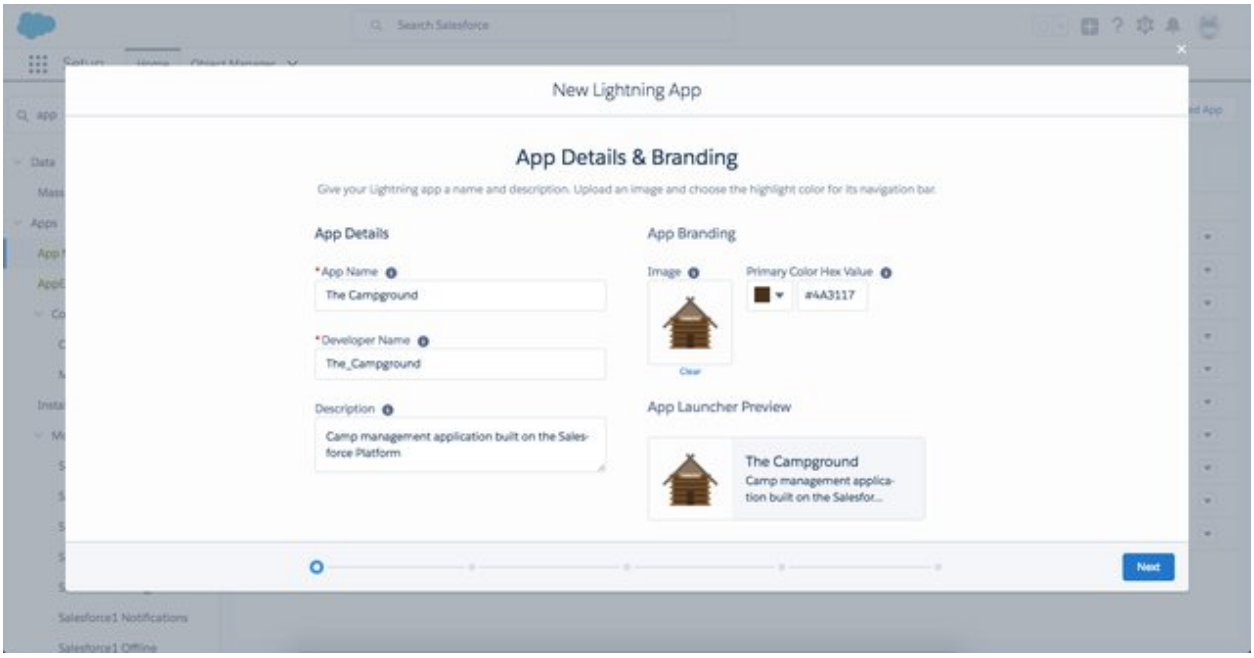
You have now enabled tracking on your custom objects!

Activity 3: Creating a New Lightning App



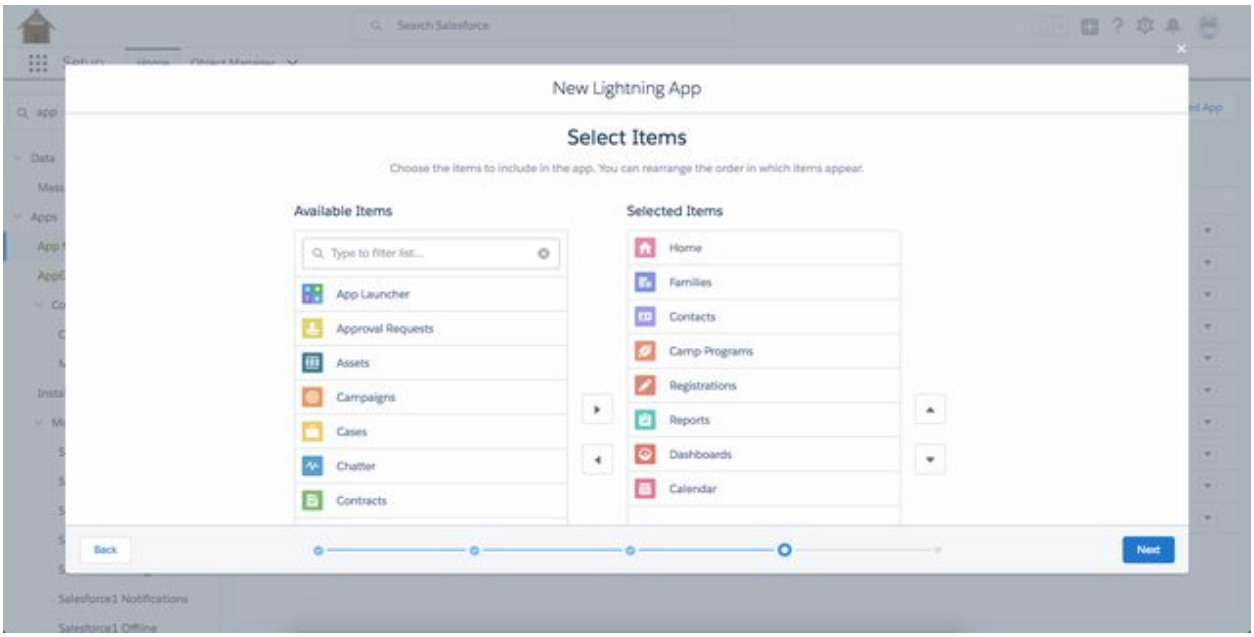
Salesforce allows users to create Apps that serve specific use cases. Some are provided by Salesforce when you start using the platform, such as Sales, Service, and Marketing. Today you are looking at the camp management use case, and you will need to create an app to access it through.

1. Back in Setup, click on the **Home** tab at the top of the screen
2. In the Quick Find search in the left navigation, start typing **App**, and click on the **App Manager** menu item
3. Click on the **New Lightning App** button
4. Set the app name as **The Campground,** and press tab to automatically set the developer name to **The_Campground**
5. From the **HOAW-Master.zip** file you downloaded locate **CampCabin.png**
6. Upload the **CampCabin.png** image as the App Image
7. Set the Primary Color Hex Value to **#4A3117**



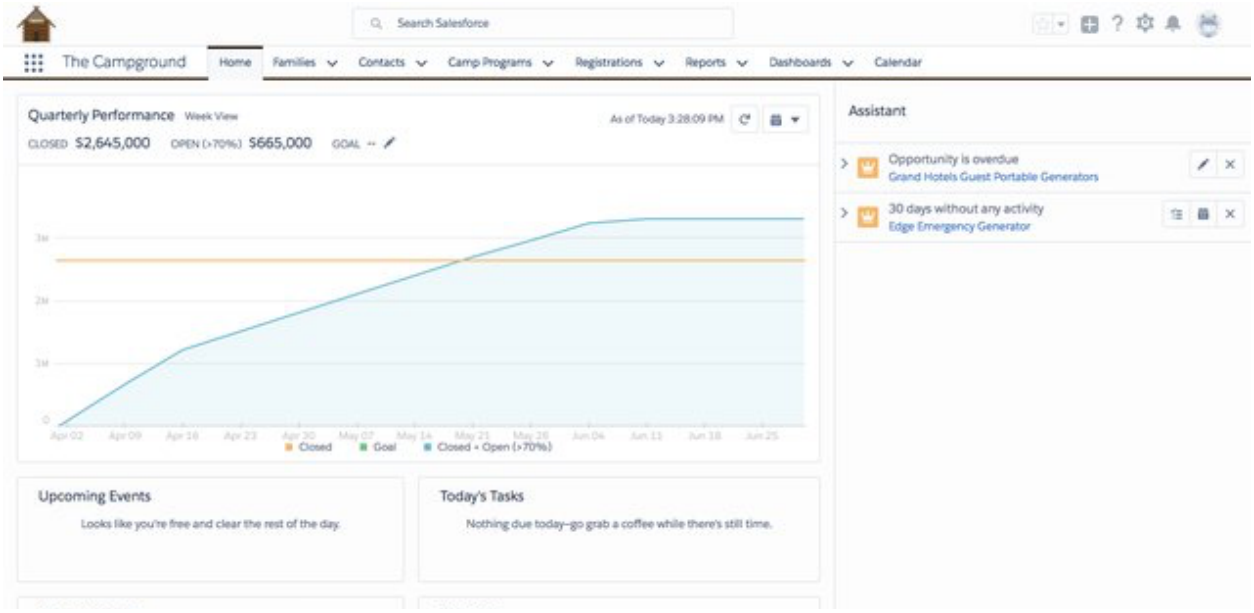
8. Click **Next**
9. Select the radio button for **Standard Navigation** and click **Next**
10. Bypass the Utility Bar Setup by clicking **Next**

11. From the **Available Items** list, select **Home**, **Families**, **Contacts**, **Camp Programs**, **Registrations**, **Reports**, **Dashboards**, and **Calendar**, and click **Next**



12. From the list of available profiles, select the **System Administrator** profile, and click **Save & Finish**

13. Click the App Launcher ( ) and select **The Campground** app



You've now built a custom app for camp management! Next, let's review how a user would see each of your objects.

Activity 4: Optimizing Object Layouts

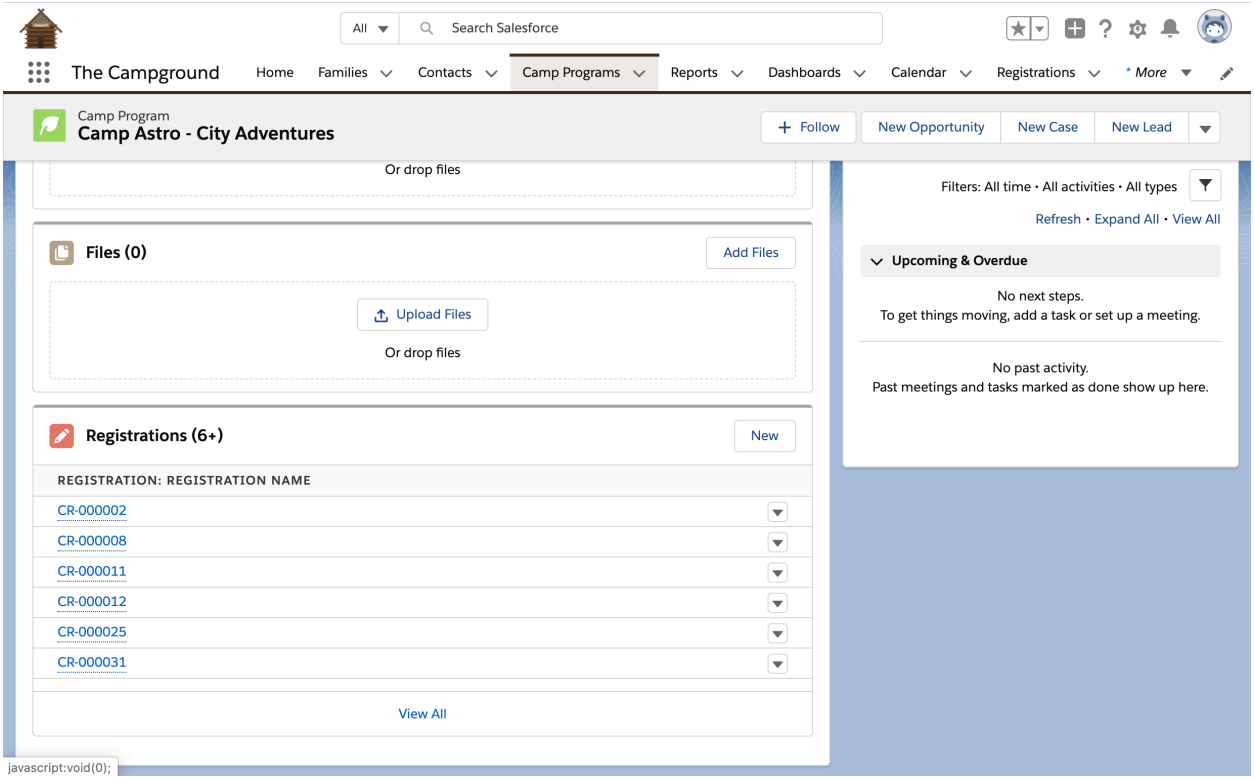
Setting object layouts make all the difference for how users interact with data in Salesforce. There are a few layouts that need to be setup:

- **Page Layouts** – Salesforce uses page layouts to define how users see fields, related lists, and actions when looking at a record.
- **Compact Layouts** – A compact layout represents the highlight reel for a record – the few key fields that tell a user all they need to know without having to scroll through the entire details section.
- **Search Layouts** – These layouts define the way records show up in search results, lookups, and list views.

When you create a custom object, Salesforce creates layouts for you, but you will want to review and edit them to make sure they meet the requirements of your app.

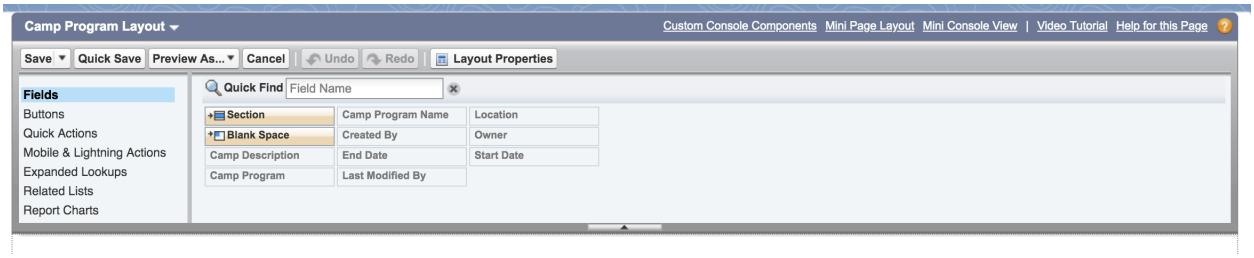
Optimize Page Layouts

Let's take a look at a Camp Program record. We can see there's a related list of all the registrations, but we can only see the registration number. Wouldn't it be useful if we could learn more about each registration without having to click into the record? We can optimize the way this page looks by changing the page layout of the object.

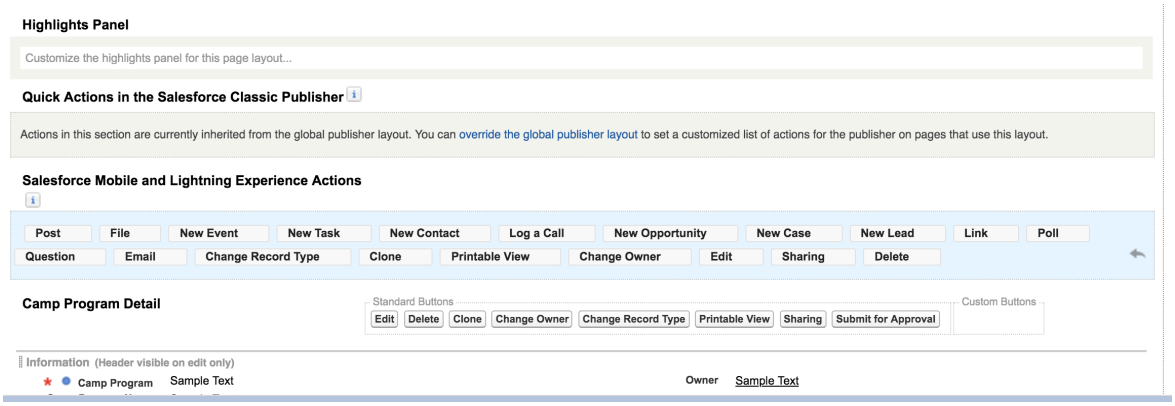


1. Click **Setup** ( ) in the top right of the page and then the **Object Manager** tab
2. Within Object Manager, find the **Camp Program** object, and click on the label link
3. In the left navigation, select **Page Layouts**, and select the **Camp Program Layout**

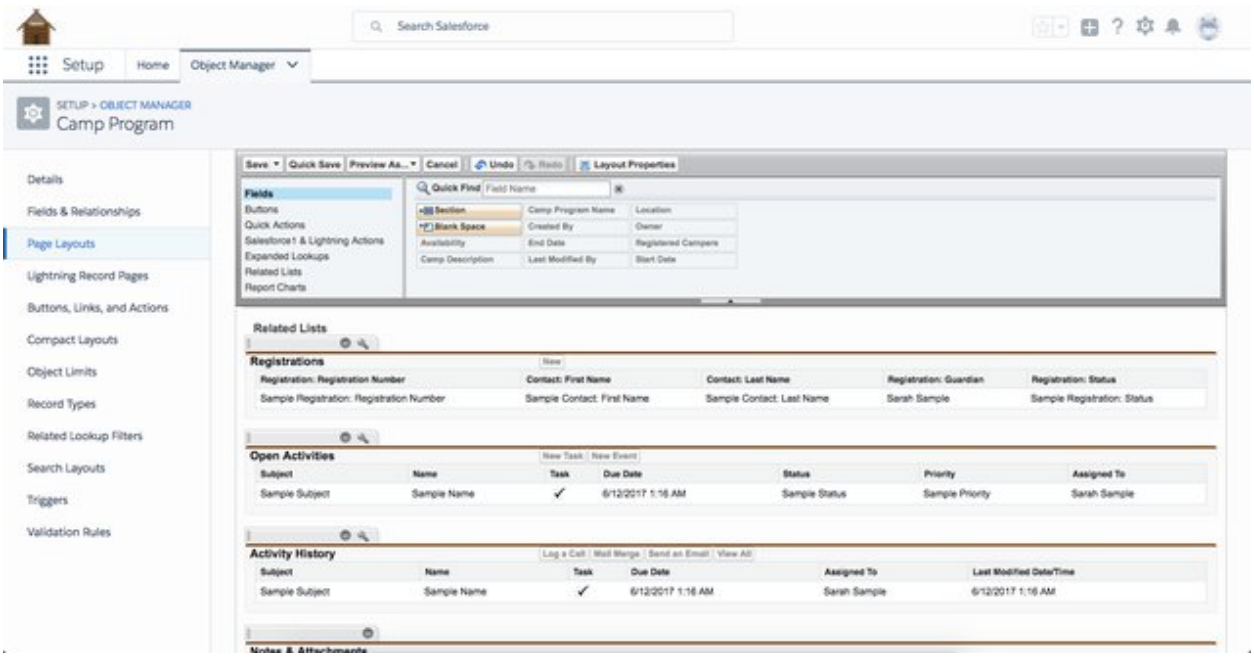
The **toolbox** for your Camp Program Page Layout looks like this:



4. Under the section "Salesforce Mobile and Lightning Experience Actions" click on the **override the predefined actions** link



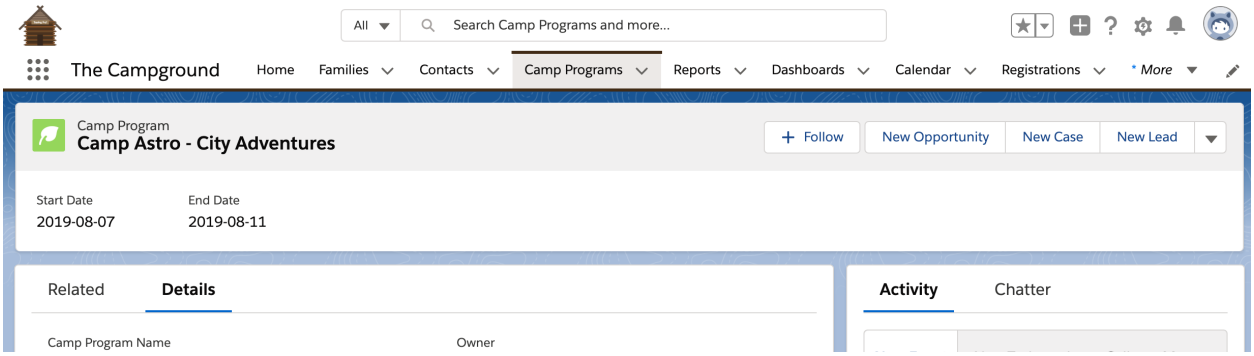
5. ***Optional*:** Add section for Availability (requires Extra Credit activity completion).
    a. From the toolbox grab a **Section** and drag it onto the layout above System Information
        i. Set the section name as **Availability**
        ii. Set the layout as **2-Column**
        iii. Set the tab-key order as **Left-Right**
    b. From the toolbox, drag the **Registered Campers** field into the Availability section
    c. From the toolbox, drag the **Availability** field into the Availability section
6. Under the Related List section in the **toolbox**, grab the **Registrations** related list, and drag it to the top of the related lists
7. Click on the wrench icon ( ) on the **Registrations** related list
    a. From the available field list, select **Contact: First Name**, **Contact: Last Name**, **Registration: Guardian**, and **Registration: Status**
    b. Click **OK**



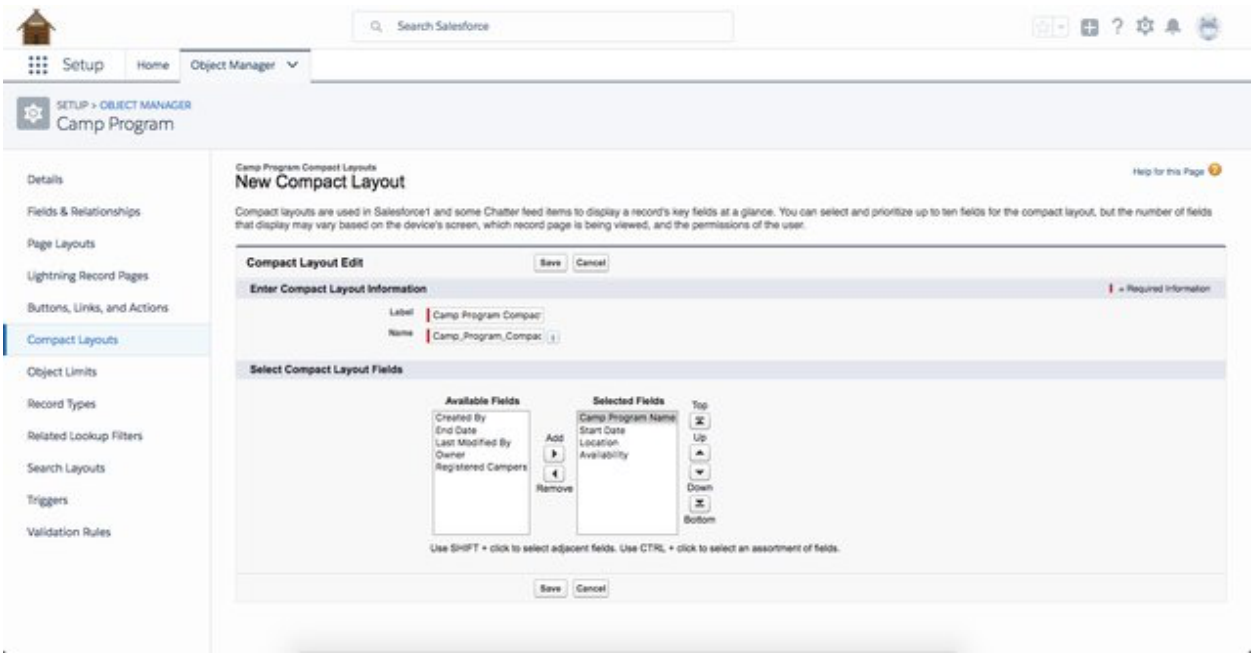
8. In the toolbox, click **Save**

Optimize Compact Layouts

On a Camp Program record, key information is shown in the compact layout. Right now it's only showing the Start Date and End Date. Let's add more information in the compact layout so Camp Managers can easily find the information they need.

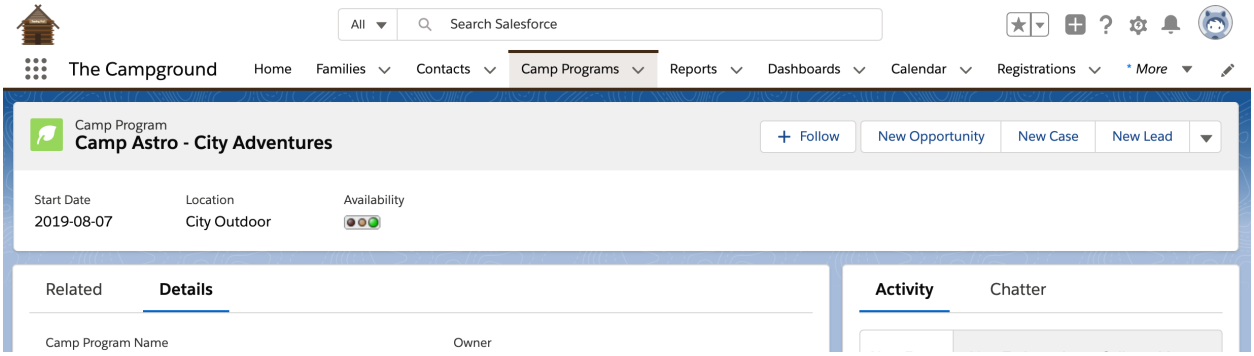


1. From the left navigation, select **Compact Layouts** and click **New**
    a. Set label to **Camp Program Compact,** and press tab to automatically set the name to **Camp_Program_Compact**
    b. From the list of available fields, select **Camp Program Name**, **Start Date**, **Location**, and **Availability** *(optional)*



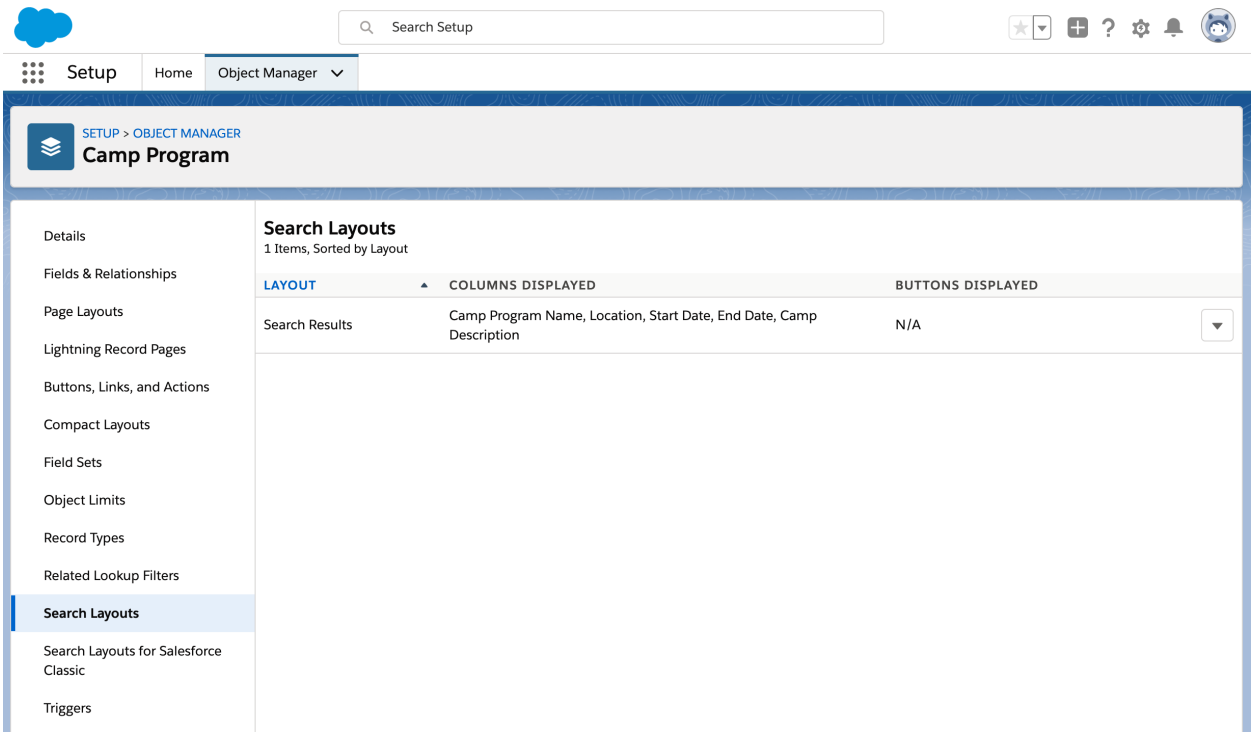
c. Click **Save**
d. Click **Compact Layout Assignment**
e. Click **Edit Assignment**
f. Select **Camp Program Compact** from dropdown as the primary compact layout
g. Click **Save**

Once you've changed the compact layout, it should look like this:



Optimize Search Layouts

1. From the left navigation select **Search Layouts**



   a. Click the caret button ( ) in the **Search Results** row and click **Edit**
   b. From the list of available fields, select **Camp Program Name**, **Start Date**, **End Date**, **Location**, and **Availability** *(optional)*
   c. Click **Save**
   d. On the left navigation, in **Search Layouts for Salesforce Classic,** repeat the above for the **Tab** layout. This edits your Recently Viewed list.

We've now optimized the Page Layout, Compact Layout and Search Layout for the Camp Programs object making it easier for users to navigate and interact with the data.

Now let's optimize the layouts for the **Registrations** object.

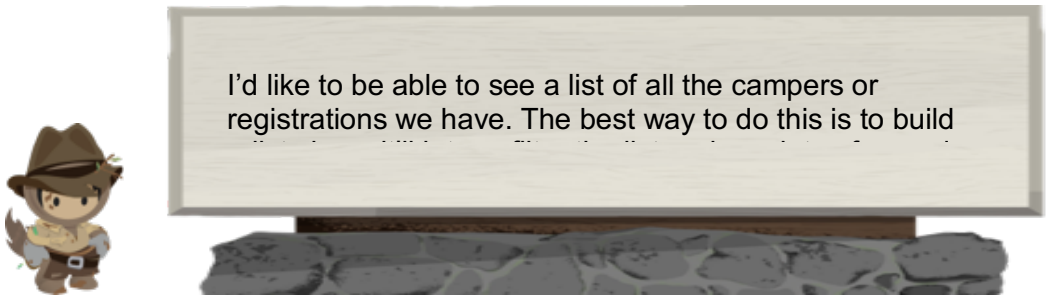
1. Click on the **Object Manager** tab at the top of the screen
2. Within Object Manager, find the **Registration** object, and click on the label link
3. In the left navigation, select **Page Layouts**, and select the **Registration Layout**
4. Enable Salesforce Mobile and Lightning Experience Actions by clicking on the **Override the predefined actions** link
5. Add section for Camper Preferences
   a. From the toolbox grab a **Section** and drag it onto the layout above System Information
      i. Set the section name as **Camper Preferences**
      ii. Set the layout as **2-Column**
      iii. Set the tab-key order as **Left-Right,** press **OK**

    b. From the page layout, rearrange the fields **Nut Allergy**, **Diabetic**, **Arts Activities**, and **Water Activities** to the Camper Preferences section
6. In the toolbox, click **Save**
7. From the left navigation, select **Compact Layouts** and click **New**
    a. Set label to **Registration Compact**, and press tab to automatically set the name to **Registration_Compact**
    b. From the list of available fields, select **Registration Number**, **Camp Program**, **Camper**, **Guardian**, and **Status**
    c. Click **Save**
    d. Click **Compact Layout Assignment**
    e. Click **Edit Assignment**
    f. Select **Registration Compact** as the primary compact layout, click **Save**
8. From the left navigation select **Search Layouts**
9. On the **Search Results** row, click the caret button () and click **Edit**
    a. From the list of available fields, select **Registration Number**, **Camp Program**, **Camper**, **Guardian**, and **Status**
    b. Select the checkbox to **Override the search result column customizations for all users.** This will allow changes to be reflect across all users in the org.
    c. Click **Save**
10. On the left navigation, in **Search Layouts for Salesforce Classic,** repeat the above for the **Tab** layout. This edits your Recently Viewed list.

Whew! That was a lot of work – but now all of your users will be able to see the right information about the camp programs and registrations wherever they are in Salesforce. Go on! Take a look in the camp program and registration records to see if you can spot where the changes are.

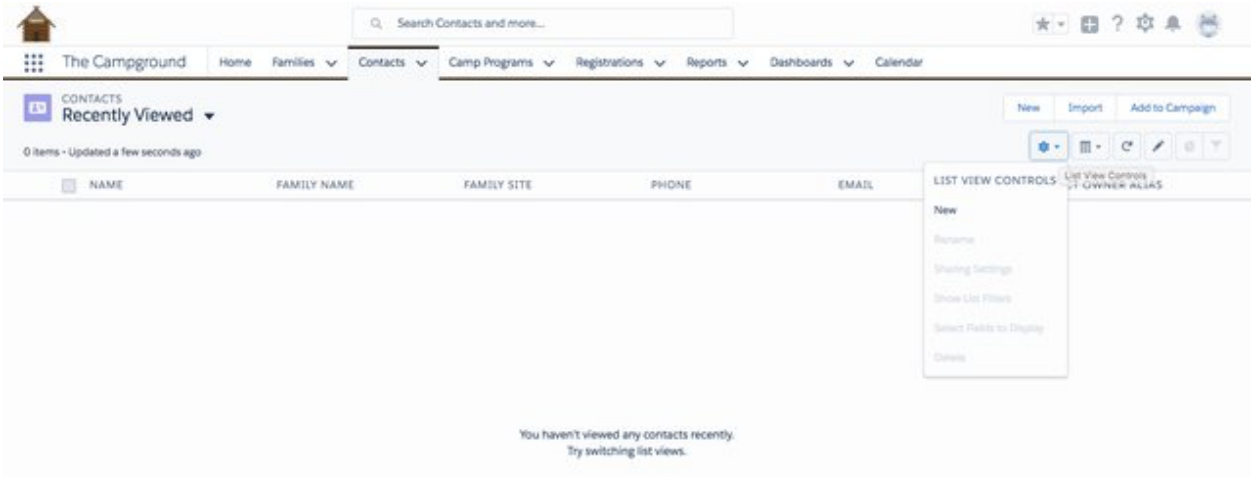
There are few other things you can do to create tailor your app: Create list views, set up a Kanban, add a Path, and create a custom Calendar.

Activity 5: Create List Views and Kanban



Let's start by creating a List View for campers in your Contacts tab.

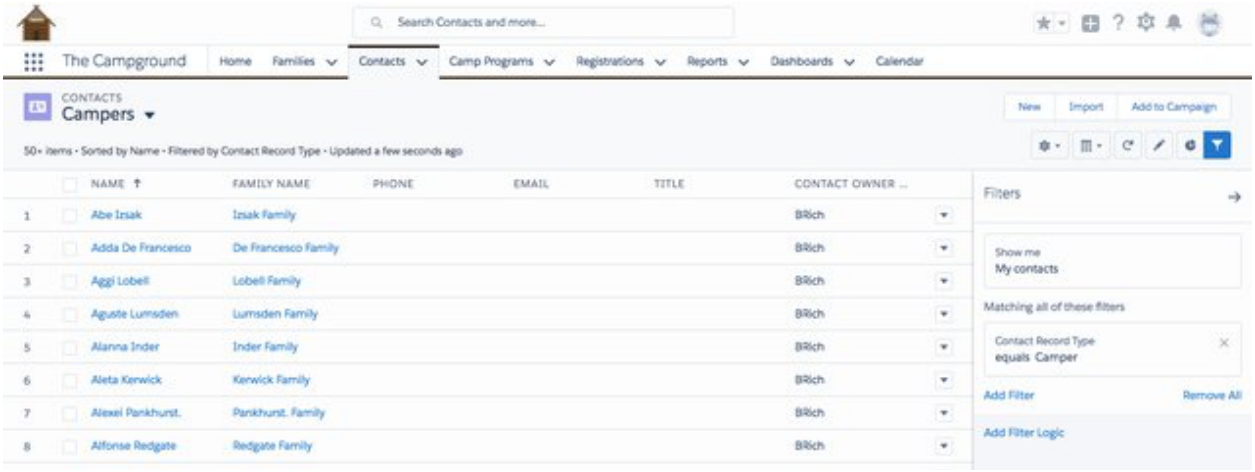
1. Click the App Launcher logo ( ) in the top left of the page, and select **The Campground** App
2. Click on the **Contacts** tab at the top of the page
3. Click the cog button ( ) in the list view and Click **New**



   a. Set the list name to **Campers**
   b. Click the radio button for **All users can see this view**
   c. On the right-side panel, click **Add Filter**
   d. Set Field to **Contact Record Type**
   e. Set Operator to **Equals** and Value to **Camper**
   f. Click **Save**

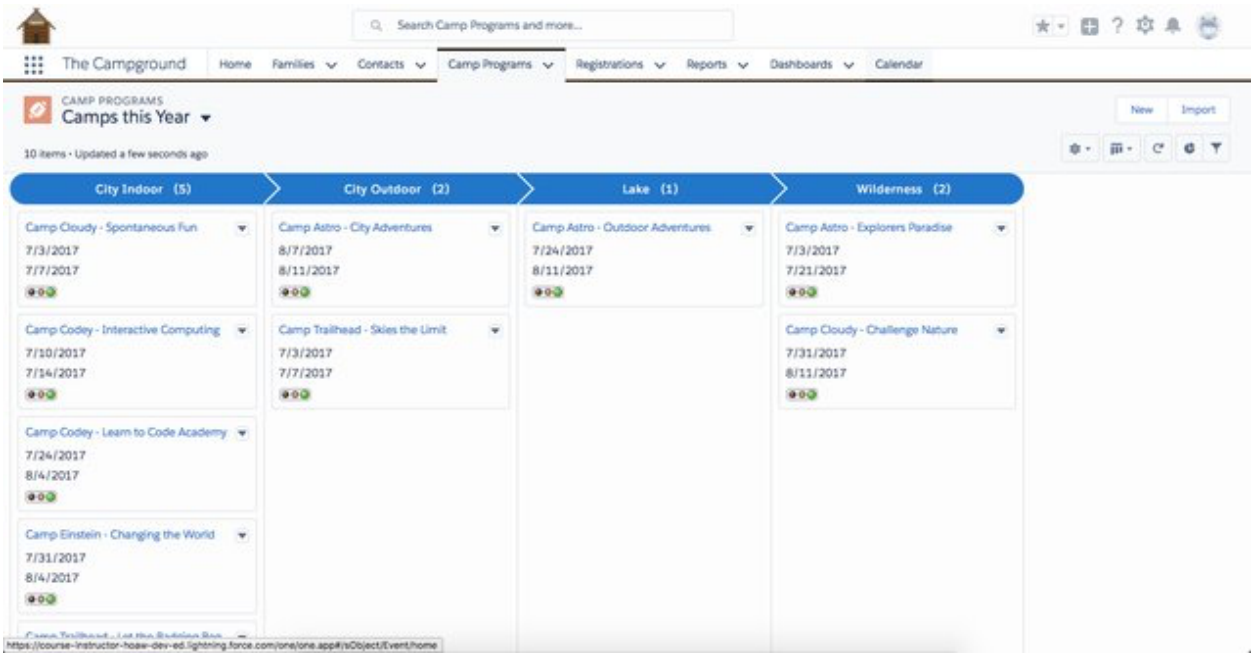
4. Click on the **Camp Programs** tab at the top of the page
5. Click the cog button ( ) in the list view and Click **New**
   a. Set the list name to **Camps This Year**
   b. Click the radio button for **All users can see this view**
   c. On the right-side panel, click **Add Filter**
   d. Set Field to **Start Date**

e. Set Operator to **Equals**



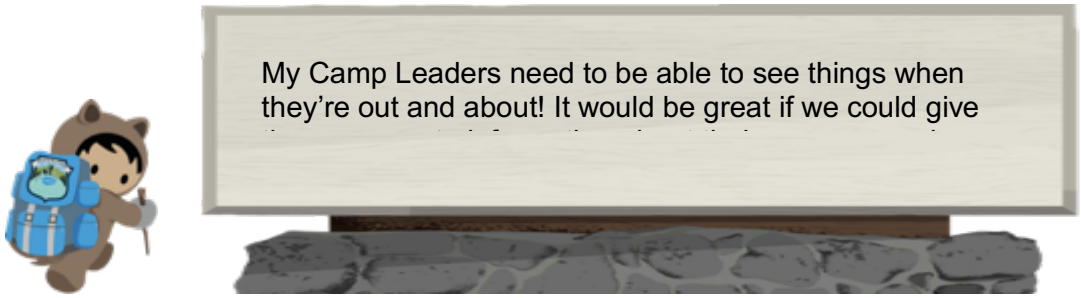
f. Set Value to **THIS YEAR** and click **Save**

6. Click the cog button ( ) in the list view and click **Select Fields to Display**
   a. From the list of available fields, select **Camp Program Name**, **Start Date**, **End Date**, **Availability** *(optional)*, and **Location** sdaf
7. Click the list button ( ) in the list view and click **Kanban**
8. Set group by to **Location**



You now have list views ready to explore your campers and your camps.

Activity 6: Customizing Salesforce Mobile



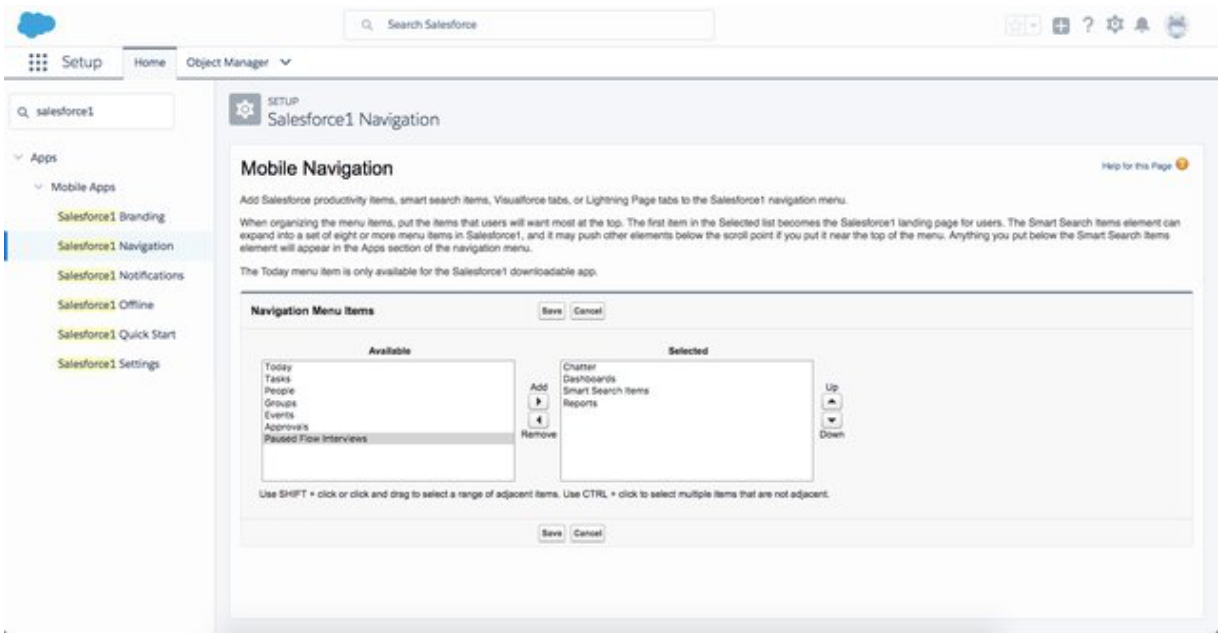
Wouldn't it be great if you could take your camp management app on the road with you? When building your app on Salesforce, it is mobile-ready immediately. By setting up page layouts, compact layouts and search layouts, users will be able to see the same information on their mobile device as they do in a web browser.

There are few unique things you can do to tailor the mobile app, including customizing branding, and the navigation. Let's take a look how.

1. Go to **Setup** and by clicking on the cog icon ( )
2. To take advantage of the new Salesforce Mobile App we need to assign the permission to the Campground users. In the Quick Find search, type **Permission Sets** and click the **New** button
3. Enter **Salesforce Mobile App** in the Label field and press tab to copy the text to the API name field.
4. Press **Save**
5. In the 'System' section at the bottom of the page, select **System Permissions**
6. Click the **Edit** button
7. Scroll down (or use ctrl+f) to search for the system permission "**New Salesforce Mobile App**" and select it.
8. Scroll up and select **Save**
9. Click **Manage Assignments** button and then **Add Assignment** to add the permission set to any user that might need access. For today, we'll just need to give access to yourself. Find your user record, select the checkbox and click **Assign** and **Done**.

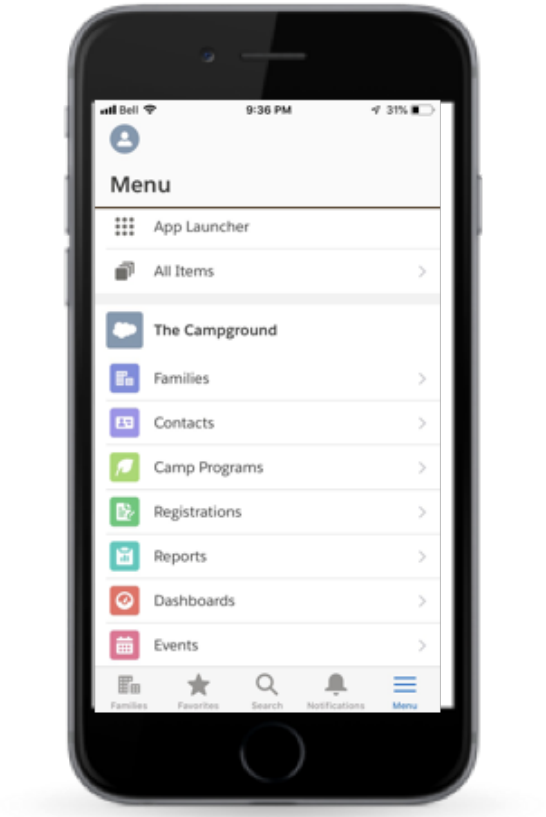
Now that our users have access to the app, let's also make sure we're on brand.

10. Go back to the Quick Find box and search **Salesforce Branding**
11. Click **Edit**
    a. Set the brand color to **#4A3117**
    b. For loading page logo, upload the **CampCabin.png** file and click **Save**
12. In the Quick Find search, enter **Salesforce Navigation**
    a. From the selected list, remove **Today**, **Tasks**, **People**, **Groups**, **Events**, **Approvals**, and **Paused Flow Interviews**
    b. Click **Save**



13. On your phone, log in to the **Salesforce** with your Developer Edition credentials.
    After you've made those changes, opening the app should look something like this:

1. If you click on the Menu icon and then select the App Launcher ( )
2. Select the **Campground App** - you should see the same tabs on your mobile as you had on the desktop!



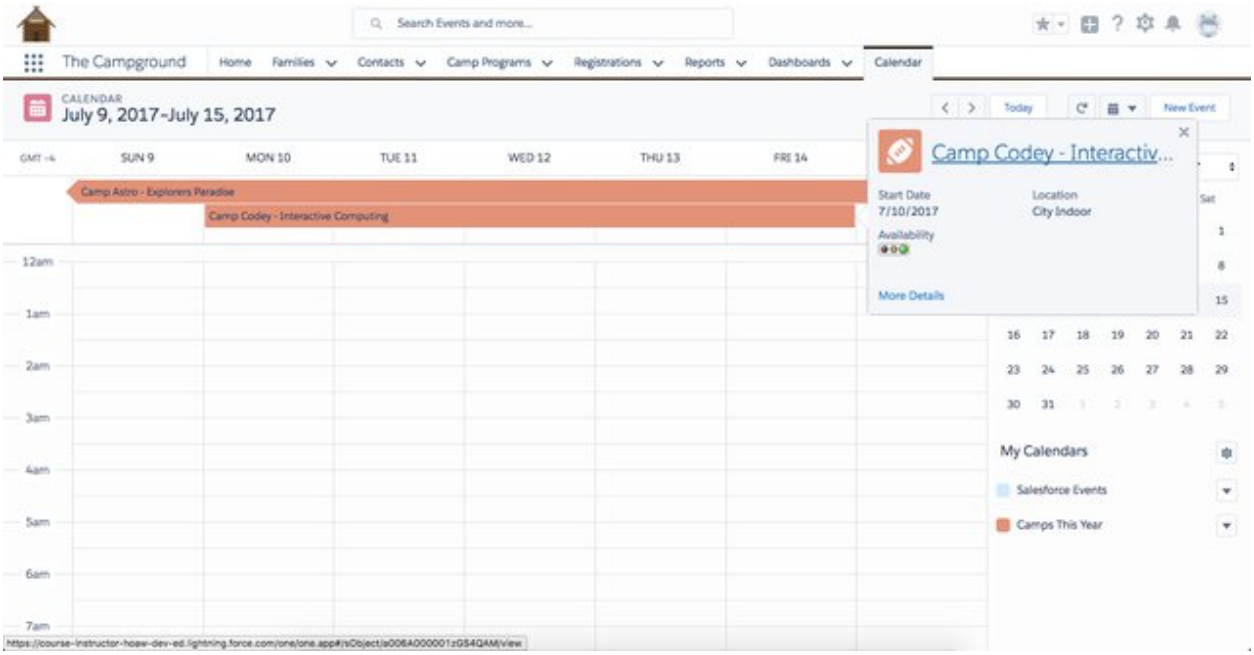
Your mobile app is ready to use whenever you're not at a computer. As you add to it, all the changes will be there without any extra work.

With your data model in place, and now a compelling user experience for users, you are almost finished building your app! The next step is adding in some logic and automation, and preparing reporting.

Extra Credit Activity: Create a Custom Calendar

List views are one way to look at your data, but Salesforce also lets you set up calendars to explore.

1. Click the App Launcher logo ( ) in the top left of the page, and select **The Campground** App
2. Click on the **Calendar** tab at the top of the page
3. Click on the cog button ( ) on the **bottom** right side of the page, and click **New Calendar**
    a. Set the object to **Camp Program**, and click **Next**
    b. Set the name to **Camps This Year**
    c. Select field for start as **Start Date**
    d. Select field for end as **End Date**
    e. Apply filter Camps This Year
    f. Set the field name to display as **Camp Program Name**
    g. Click **Save**

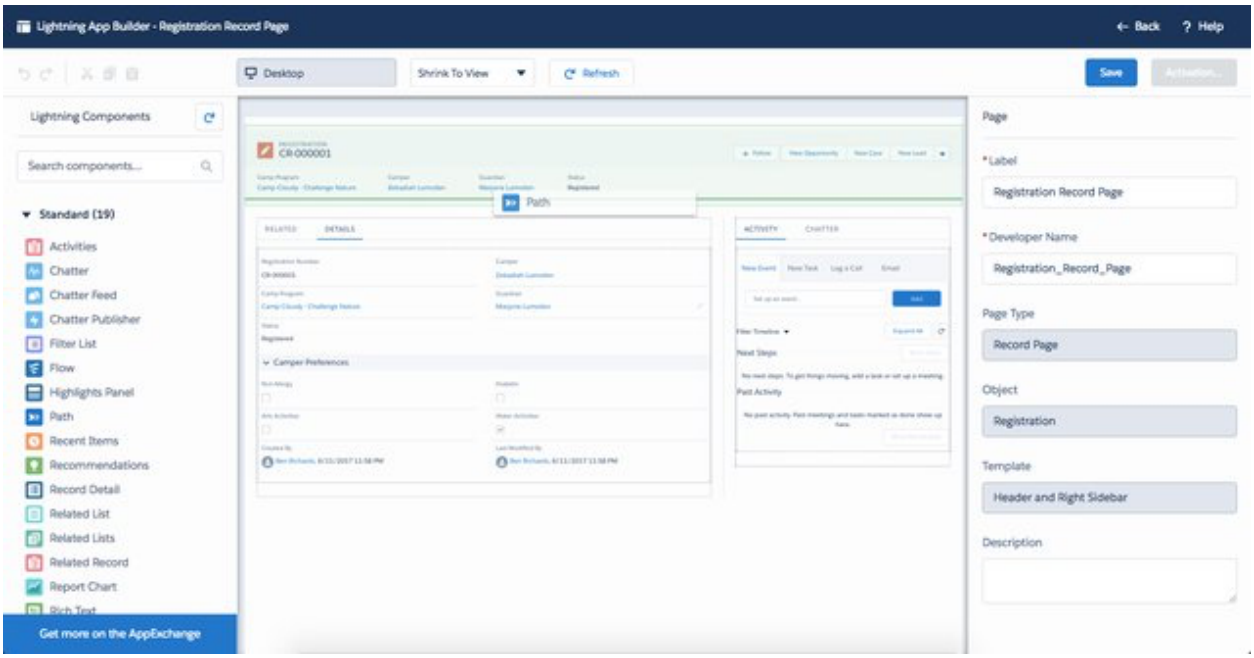


You now have a custom calendar that will show what camps are running by week or month!

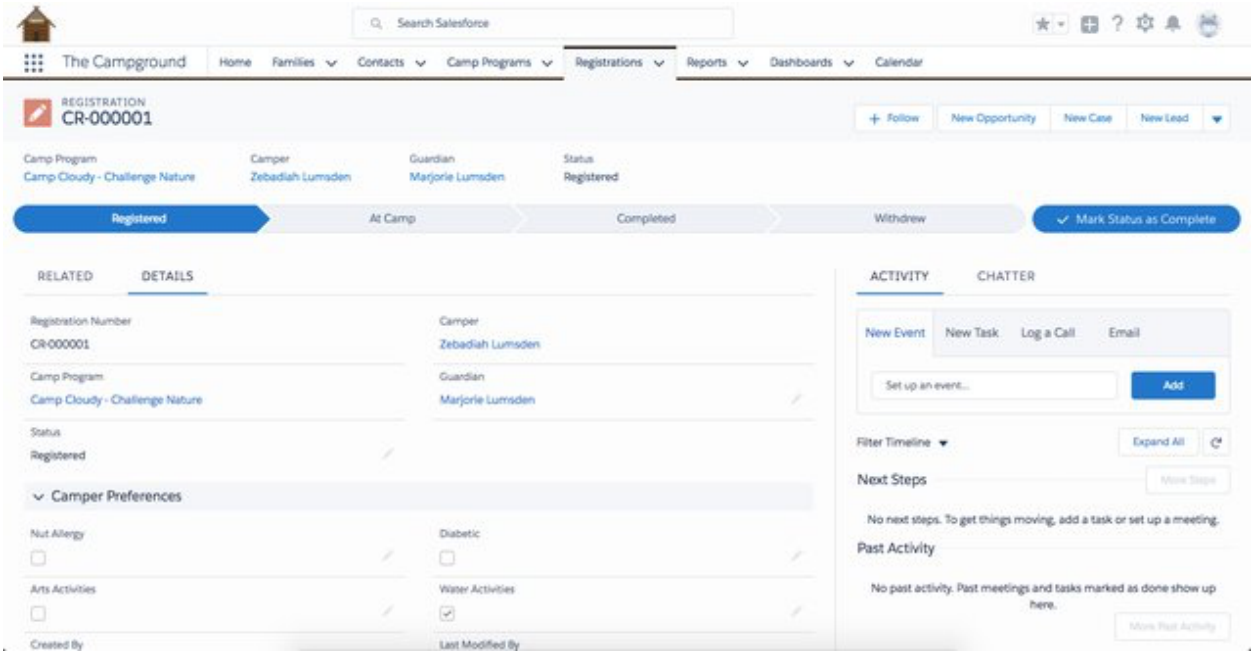
Extra Credit Activity: Creating a Path

Salesforce introduced Paths with the Lightning Experience, allowing administrators to add visual paths to lightning app pages to indicate status, stages, and other progression attributes. Let's add one to your Registration object

1. Click on the Cog icon ( ) in the top right of the page, and click **Setup**
2. In the Quick Find search, start typing **Path**, and click **Path Settings**
3. Click on **Enable**
4. Click on **New Path**
    a. Set the path name as **Registration Status**
    b. Set the API reference name as **Registration_Status**
    c. Select the object **Registration**
    d. Select the picklist **Status**
    e. Click **Next**
    f. Bypass adding field and guidance, and click **Next**
    g. Set path to **Active**
5. In the Global Search, search for **CR-000001** and click on the record
6. Click on the **cog** icon ( ) in the top right of the page, and click **Edit Page**
7. From the toolbox on the left of the page, drag **Path** under the Highlights Panel



8. Click **Save**
9. Click **Activate**
10. Click **Assign as Org Default**
11. Select **“Desktop and Phone”**
12. Click **Save**
13. Click **Back** at the top of the page



Awesome, you have now added a path to the registration object, allowing users to visually identify the status of the registration at a glance.

Module D: Adding Logic and Automation

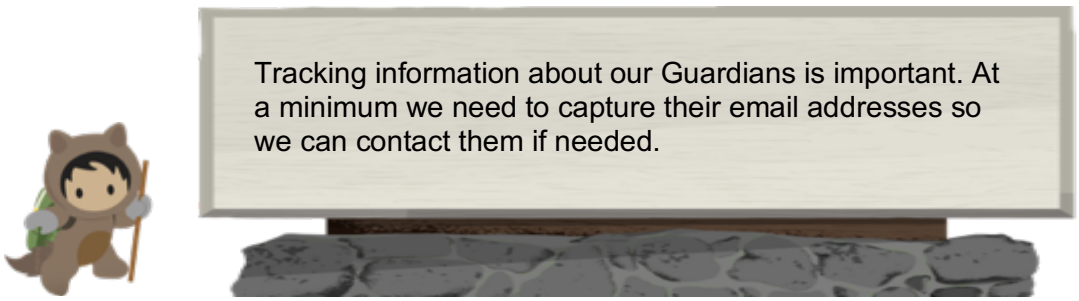
The Salesforce platform allows administrators to create both simple and complex logic and automation, all with clicks not code. This declarative approach to building ensure that you as an administrator can be agile, flexible, but also powerful!

There are a few types of declarative logic and automation at your disposal:

- **Validation Rules** – Create criteria based checks within salesforce that show users a warning message when criteria have not been met.
- **Process Builder** – Process-driven workflow in the format of if-this-than-that questions, enabling automated actions to happen with criteria are met.
- **Workflow** – Action-driven workflow that can be initiated immediately, or scheduled into the future.
- **Flows** – Complex automation where administrators can create screens or wizards to walk users through a process.
- **Approvals** – Formal approval chains that look at criteria to determine who should approve a record before it proceeds to its next step.

Today, you are going to use validation rules and process builder to add some complexity to your camp management application.

Activity 1: Creating Validation Rules



Validation rules are helpful for a few key use cases that you will explore now. Setting required fields in Salesforce can cause problems, especially when you are using record types. If you're importing data in, you might want to consider turning off validation rules so you don't get any errors.

Consider if you want to enforce a rule that all Guardian contacts must have an email address. If you make the email address field required, it will also be required for Campers, which is not necessarily true. Enter validation rules, where you can make a field required on saving, under certain conditions.

1. Click on the Cog icon ( ) in the top right of the page, and click **Setup**
2. Click on the **Object Manager** tab at the top of the page
3. Within Object Manager, find the **Contact** object, and click on the label link
4. In the left navigation, click on **Validation Rules** and click **New**
    a. Set the rule name to **Guardian Email Required**

b. In the error condition box set the formula to

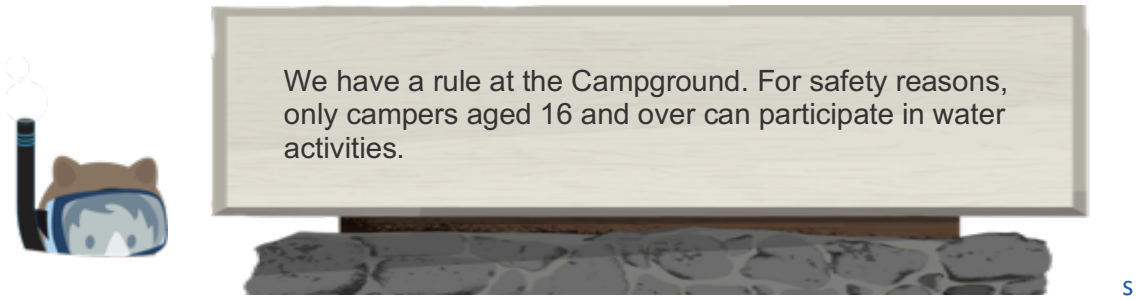
```
RecordType.Name = "Guardian" && ISBLANK ( Email )
```

c. In the error message box set the text to **A guardian must have an email address.**
d. Set the error location to **Top of Page** and click **Save**

Now that we've set up the validation rule, let's test it to see it in action.

1. In the Global Search, search for **Cathrine Darcy** and select the record
2. Click on the **Details** tab on the record
3. Click the pencil icon beside the **Email** field to edit
4. Delete the email address, and click **Save**
5. Confirm that the validation error pops up

Sweet! You have made the email field required, only for a Guardian contact. That is one example of where validation rules are effective. Another great use case is business validation.



How will we make sure no campers under the age of 16 sign up for a water activity? You can use a validation rule to check that before saving a record.

1. Go to **Setup** by clicking on the Cog icon ( )
2. Click on the **Object Manager** tab at the top of the page
3. Within Object Manager, find the **Registration** object, and click on the label link
4. In the left navigation, click on **Validation Rules** and click **New**
    a. Set the rule name to **Water Activity Age Check**
    b. In the error condition box set the formula to

```
Water_Activities__c = TRUE && ( Today() - Camper__r.Birthdate ) < ( 16 * 365.25)
```

    c. In the error message box set the text to **This camper is under 16 years old.**
    d. Set the error location to **Top of Page**
    e. Click **Save**

Testing the validation rule:

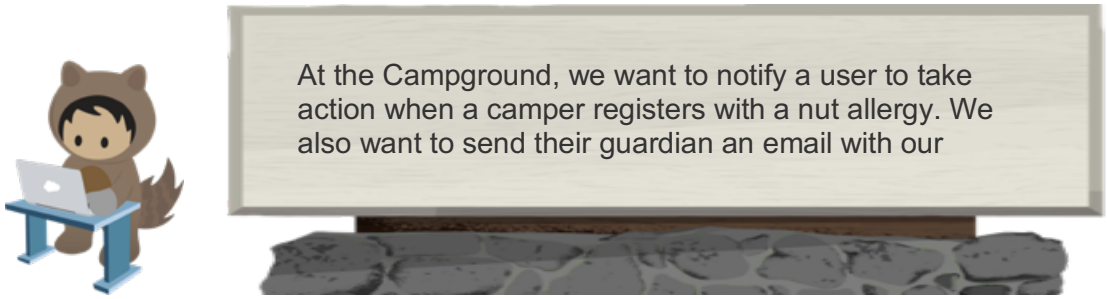
1. In the Global Search, search for **Sherry Howie** and click on the record
2. Locate the **Registrations** related list, and click on the **Registration Number** link

3. Click the pencil icon beside the **Water Activities** field to edit
4. Select the checkbox, and click **Save**
5. Confirm that the validation error pops up

Safety first! You don't want to have your application get in the way of your business rules, and validation rules help to support that.

Activity 2: Automating with Process Builder

The next type of logic and automation you are going to include is with Process Builder. Salesforce makes it easy to setup workflow by structuring if-this-than-that statement, and visually representing them in a process flow.



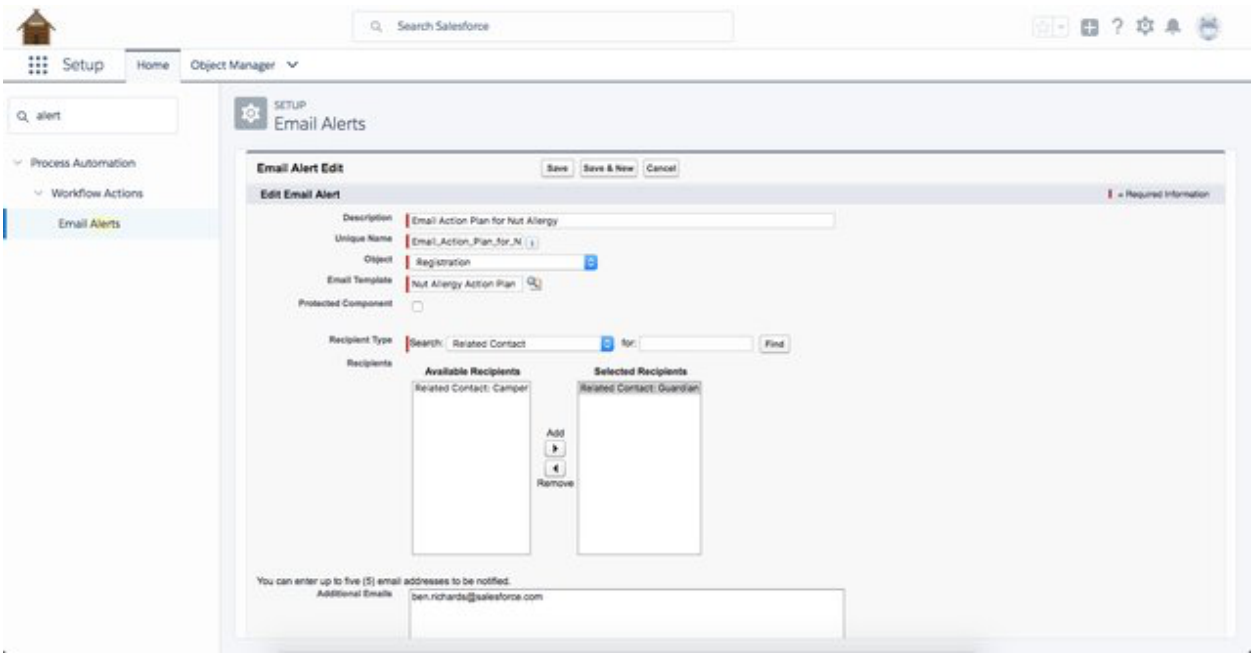
First, you will need to build an email template, then you can set up the automated email alert.

Create an email template

1. Go to **Setup** by clicking on the Cog icon ( )
2. In the Quick Find search in the left navigation, start searching for **Template**, and select the menu link **Classic Email Templates**
3. Click the **New Template** button
4. Select a **Text** template, and Click **Next**
    a. Select the checkbox for **Available for use**
    b. Set the email template name to **Nut Allergy Action Plan**
    c. Set the subject to **Our action plan for {!Registration__c.Camper__c}'s Nut Allergy**
    d. From the **HOAW-Master.zip** file you downloaded locate **EmailTemplate.txt**
    e. Set the email body with the text from **EmailTemplate.txt**
    f. Click **Save**

Create an email alert

5. In the Quick Find search in the left navigation, start searching for **Alert**, and select the menu link **Email Alert**
6. Click the checkbox for **Do not show again** and continue
7. Click **New Email Alert**
    a. Set description as **Email Action Plan for Nut Allergy,** and press tab to automatically set the unique name as **Email_Action_Plan_for_Nut_Allergy**
    b. Select object as **Registration**
    c. Select the email template **Nut Allergy Action Plan**
    d. Set recipient type as **Related Contact**
    e. From the list of available recipients, select **Related Contact: Guardian**
    f. In the additional emails box, enter **your email** (so you can receive the notification as a test)

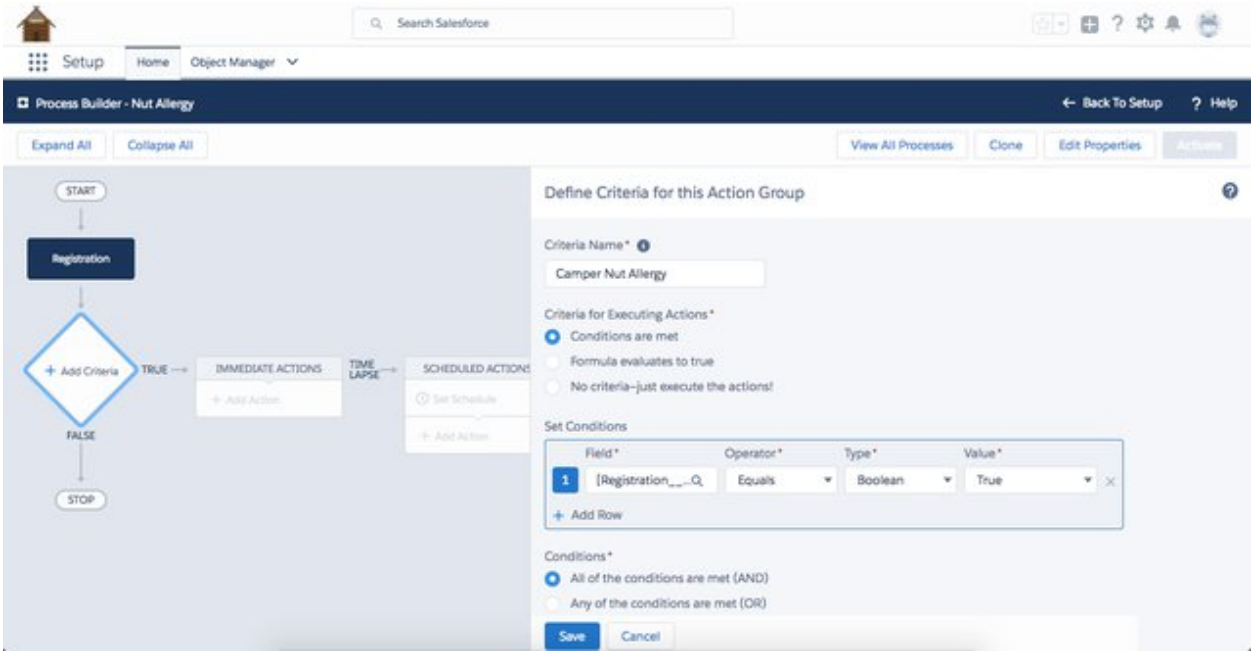


g. Click **Save**

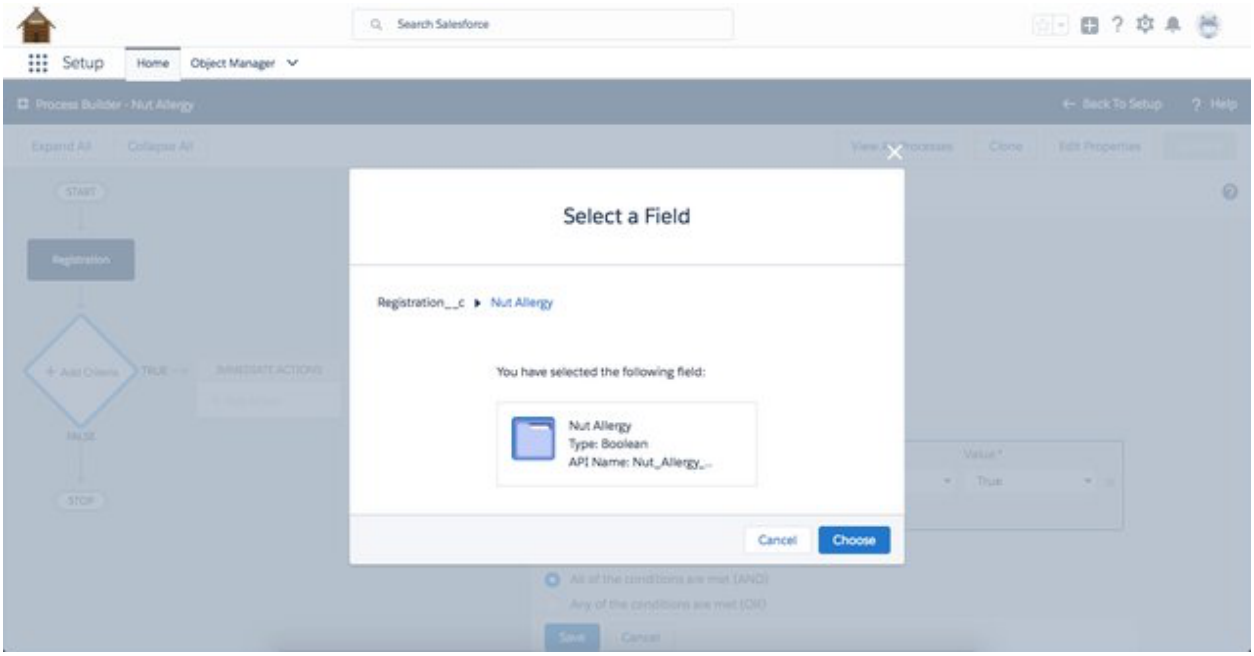
Create an automated email alert process

1. In the Quick Find search in the left navigation, search for **Process Builder**
2. Click **New**
3. Set the process name to **Nut Allergy** and press tab to automatically set name to **Nut_Allergy**
4. Set the process to start when **A record changes**
5. Click **Save**
6. Click **Add Object**
    a. Select **Registration** from the dropdown
    b. Start the process when a record is created or edited
    c. Click **Save**

7. Click **Add Criteria**
    a. Set the criteria name to **Camper Nut Allergy**



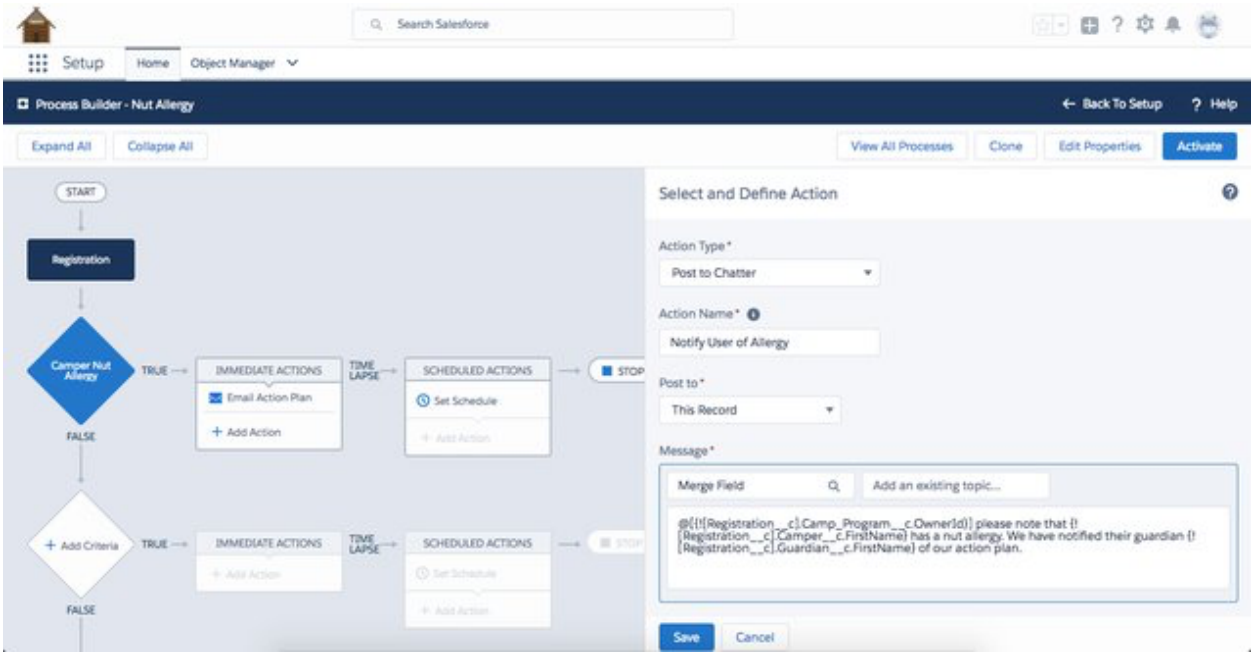
    b. Set condition 1 to be the **Nut Allergy** field, with operator as **Equals,** type as **Boolean**, and value as **True**
    c. Select the condition radio button for **All of the conditions are met (AND)**
    d. Under Advanced, select the checkbox for **Yes**
    e. Click **Save**



8. Click on **Add Action** under Immediate Actions
    a. Select action type **Email Alert**

b. Set action name to **Email Action Plan**
c. Set the email alert to **Email_Action_Plan_for_Nut_Allergy**

9. Click on **Add Action** under Immediate Actions
    a. Select action type **Post to Chatter**
    b. Set action name to **Notify User of Allergy**
    c. Select post to as **This Record**
    d. From the **HOAW-Master.zip** file you downloaded locate **ChatterPost.txt**
    e. Set the message with the text from **ChatterPost.txt**
    f. Click **Save**



10. Click **Activate**
11. Click **Back to Setup**

Now let's test the process and see it in action:

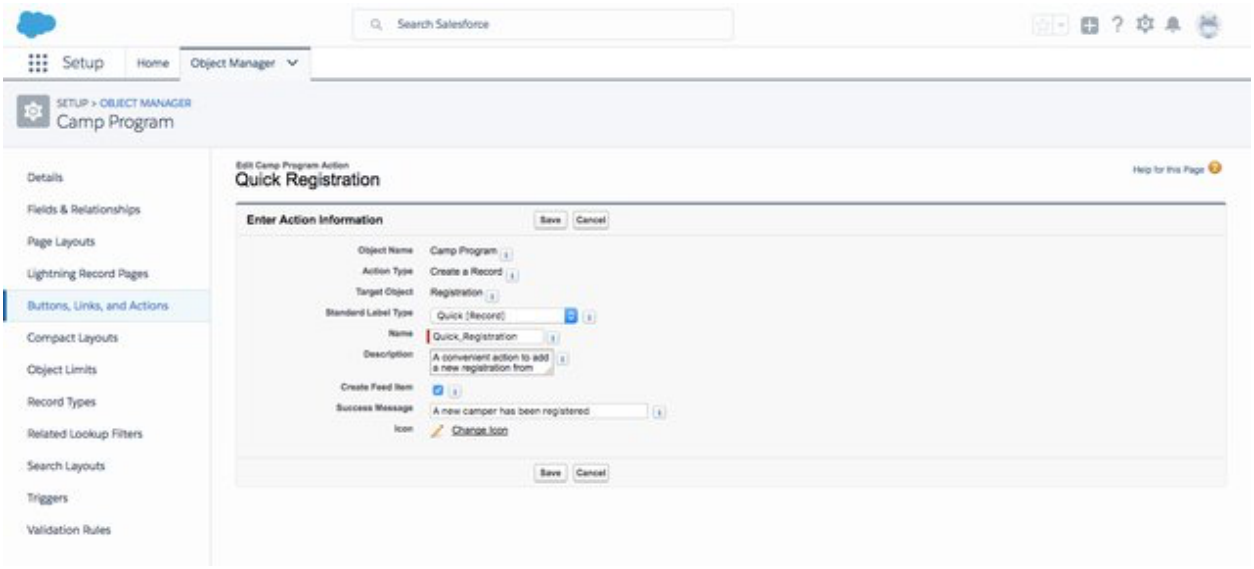
1. In the Global Search, search for **Sherry Howie** and click on the record
2. Locate the **Registrations** related list, and click on the **Registration Number** link
3. Click the pencil icon beside the **Nut Allergy** field to edit
4. Select the checkbox, and click **Save**
5. Click on the **Chatter** tab on the record to see the notification, and check your inbox for the email alert.

Congratulations, you have now setup automation around a use case for camper safety!

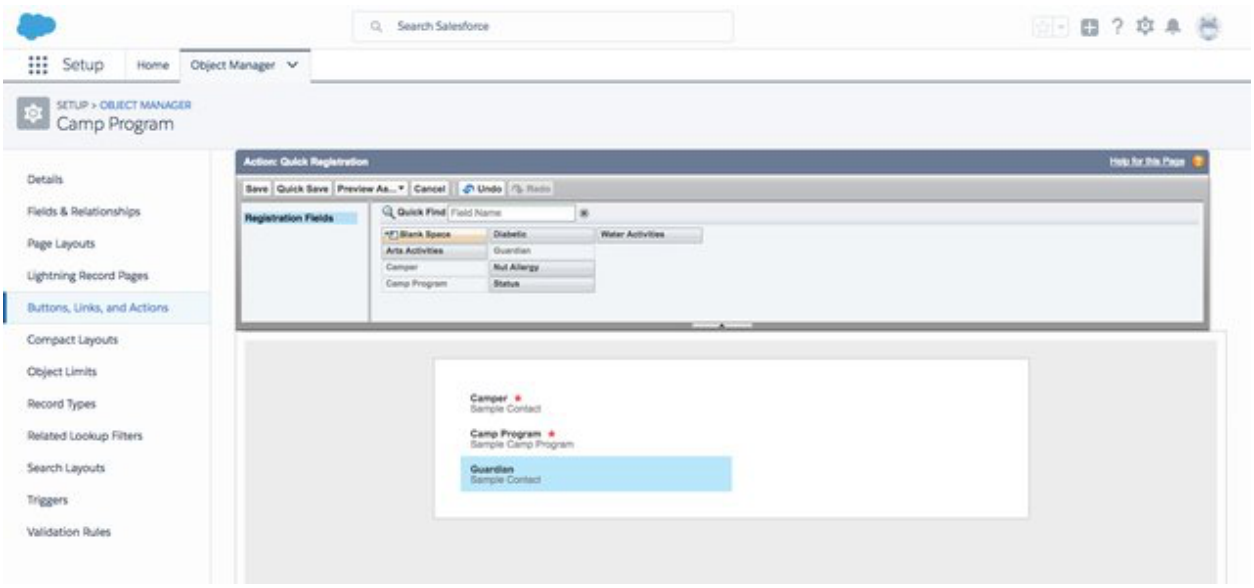
Activity 3: Creating a Custom Quick Action

The last bit of logic that you will want to include in your app are quick actions, giving your users easy ways to create and update data, without having to do more work than necessary.

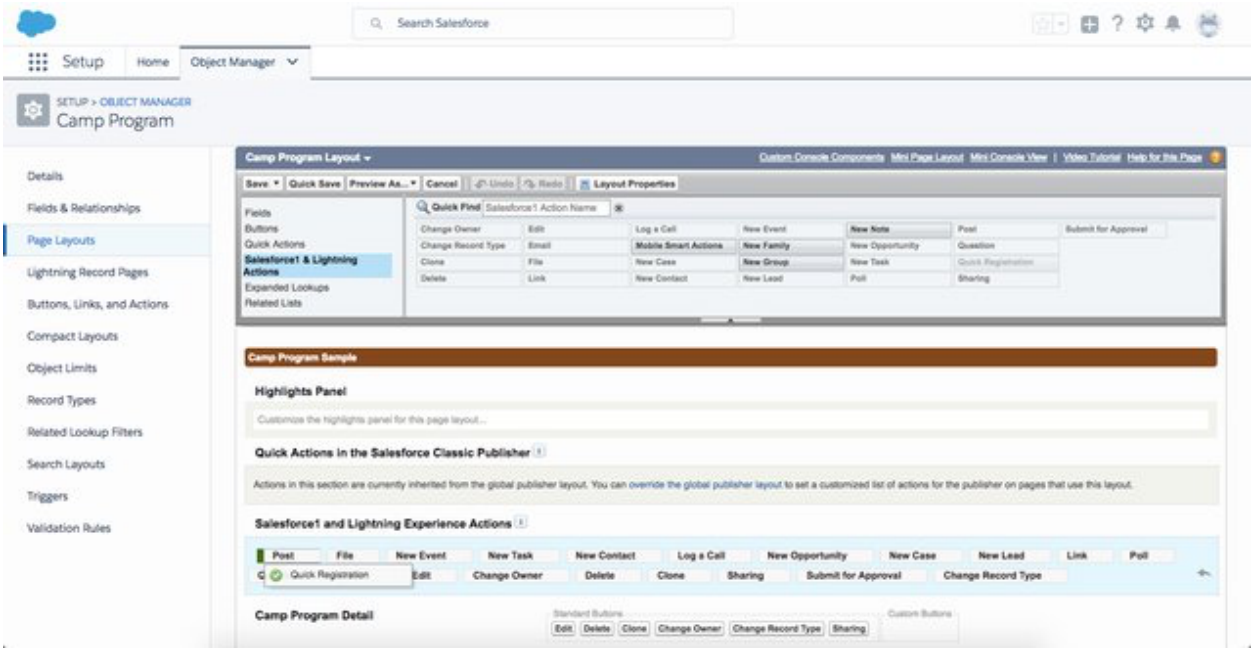
1. Go to **Setup** by clicking on the Cog icon ( )
2. Click on the **Object Manager** tab at the top of the screen
3. Within Object Manager, find the **Camp Program** object, and click on the label link
4. From the left navigation, select **Buttons, Links, and Actions**, and click **New Action**
    a. Set the action type to **Create a Record**
    b. Set the target object to **Registration**
    c. Set the standard label type to **Quick [Record]**
    d. Set the name to **Quick_Registration**
    e. Select the checkbox for **Create Feed Item**
    f. Set the success message to **A new camper has been registered** and click **Save**



5. From the toolbox, drag in the fields for **Guardian**

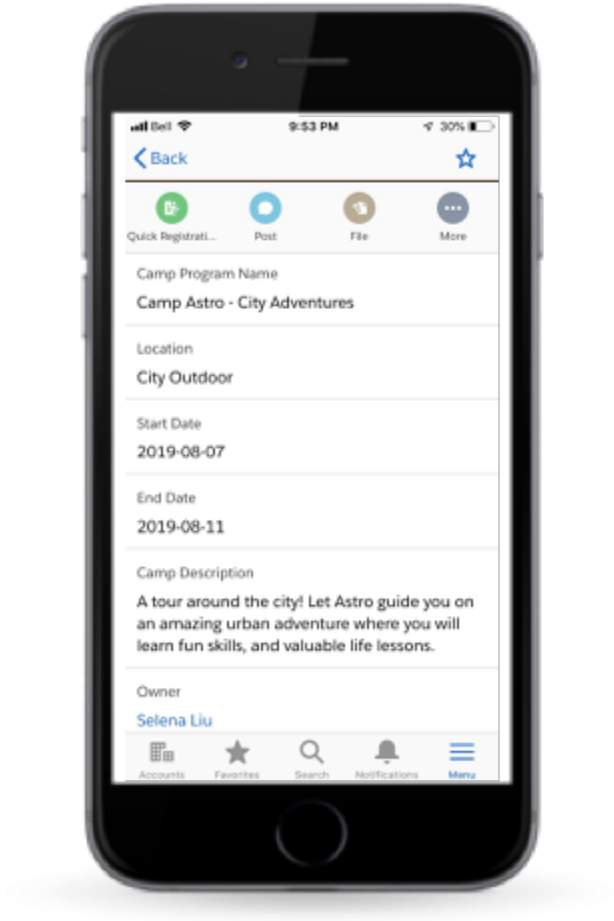


6. In the toolbox, click **Save**
7. Under Predefined Field Values, click **New**
    a. Set the field name to **Status**
    b. Set the specific value to **Registered**
    c. Click **Save**
8. From the left navigation, select **Page Layouts**, and click **Camp Program Layout**
9. In the toolbox, click **Mobile and Lightning Actions**
10. Drag **Quick Registration** into the Salesforce Mobile and Lightning Experience Actions page section



11. In the toolbox, click **Save**

12. On your phone, open **Salesforce Mobile** and click the menu button in the bottom right
13. In the navigation, select **Camp Programs**
14. Select **All Records**, and click **Camp Astro – City Adventures**
15. Click on **Quick Registration** in the top left corner



16. Set the Camper to **Susanne Darcy**
17. Set the Guardian to **Catherine Darcy**
18. Click **Save**

You have now created an easy way for a user to register a camper on a mobile device. You are almost done with your app, the last thing to do is setup reporting on your camp management.

Module E: Reporting and Dashboards

Let's recap what you have accomplished so far:

- Created a data model for camp management
- Set up a compelling user experience for your users
- Designed logic and automation to make the application smart.

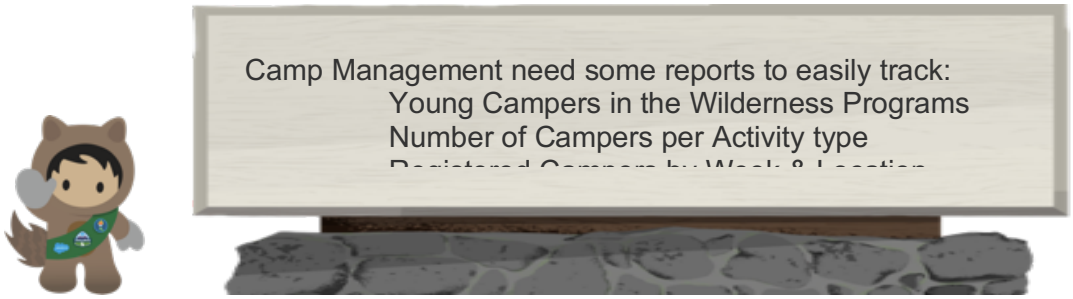
The last thing to do is report on the data in your application. To do it, let's create reports that show us some key information, and organize them into a dashboard.

There are four types of reports that you can create in Salesforce:

- **Tabular** – A tabular report is used to show a table of data, best for organizing lists when you don't need to create charts
- **Summary** – Best used when you want to summarize, group, and display data in a chart. A summary report allows users to choose how to organize tabular data to create an insight
- **Matrix** – Summary reports allow you to group data on one dimension, while a matrix report allows you to group data on multiple dimensions
- **Joined** – Used to compare data across two different objects, with a common relationship on both. Joined reports are used infrequently, and can't be used to create charts.

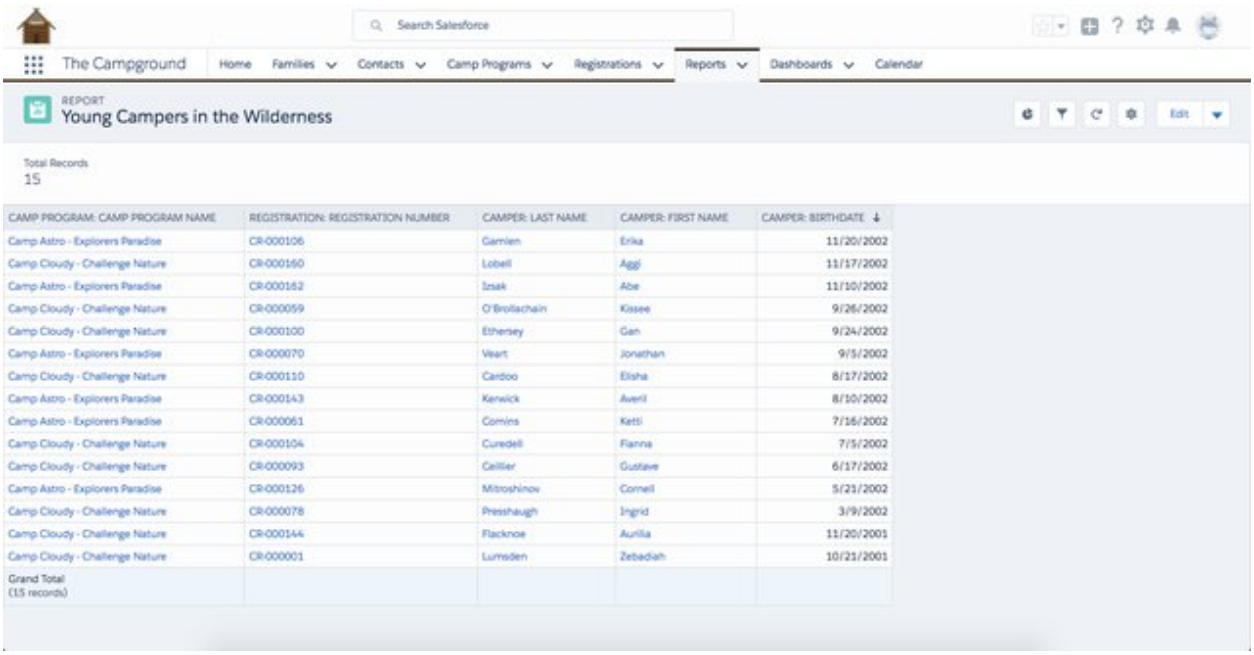
In addition to the different types of reports, you can also create dashboards to showcase the charts for your report data. Both reports and dashboards are stored in Folders, which allow for administrators to set how reports and dashboards can be shared.

Today, you are going to build a tabular, summary, and matrix report.

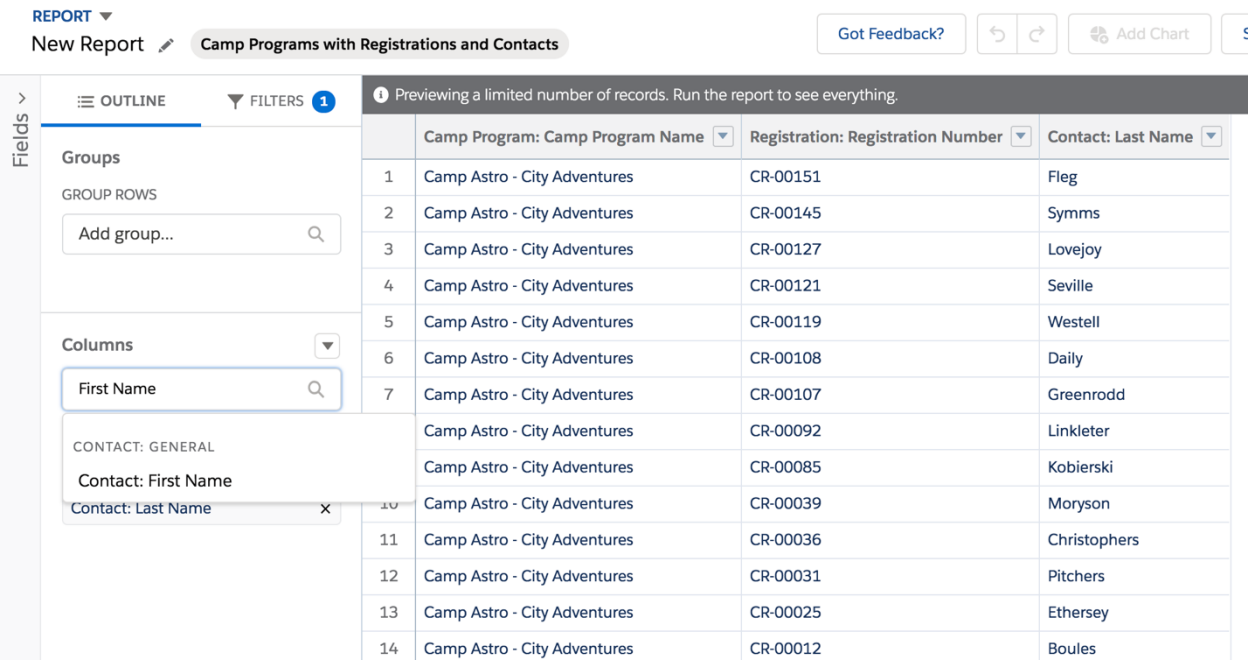


Activity 1: Create a Tabular Report

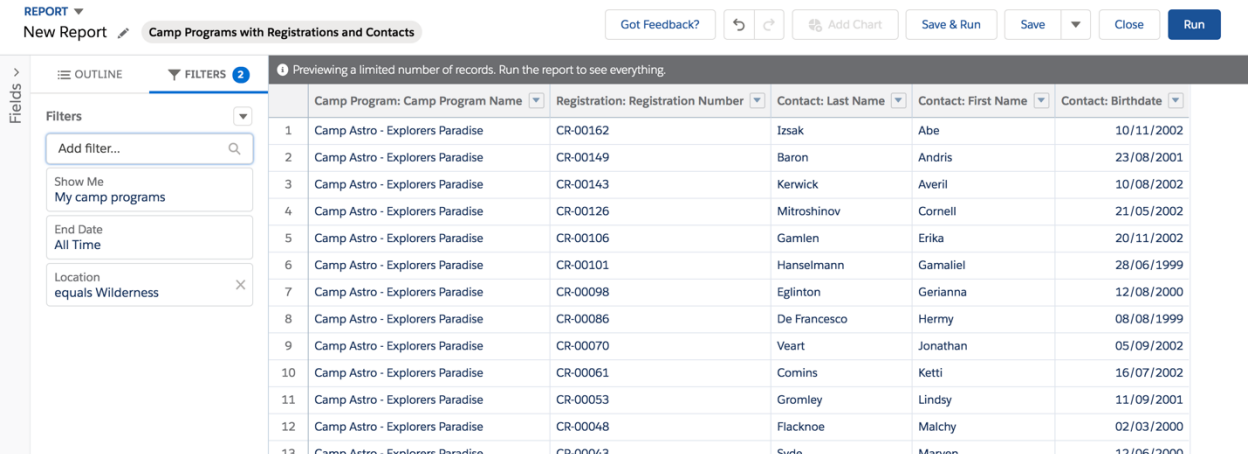
The first report you are going to build will give camp managers a view into the youngest campers in their care. This report is specifically important to camp managers in the Wilderness programs.



1. Click the App Launcher logo ( ) in the top left of the page, and select **The Campground** App
2. Click on the **Reports** tab at the top of the page
3. Click **New Folder** in the top right corner
4. Set the name to **Camp Management Reports,** and press tab to automatically set the Folder Unique Name to **Camp_Management_Reports**
5. Click **New Report** in the top right corner
6. In the quick find search box, search for **Registrations**, and select **Camp Programs with Registrations and Contacts**
7. Click **Continue**
8. Under the Outline tab, in the Columns section, search and select **Contact: First Name**



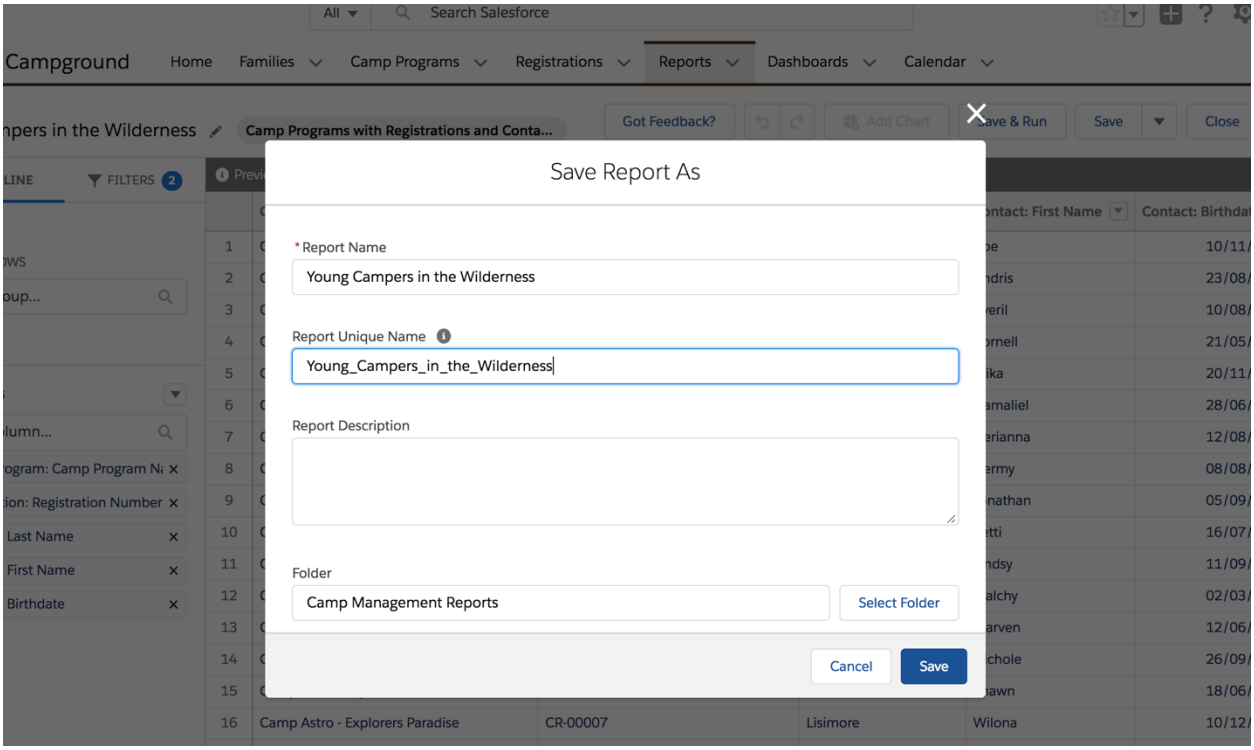
9. You can reorder the fields by dragging **Contact: First Name**, above **Contact: Last Name**
10. Using the Columns section, search and select **Birthdate** and click to add
11. Click on the **Filters** tab
    a. Search and select **Location**
    b. Set the operator to **Equals**
    c. Set the value to **Wilderness**
    d. Click **Apply**



12. To organize the data, let's sort by **Birthdate**
    a. Click on the **caret** button beside **Contact: Birthdate** ()
    b. Set direction to **Descending**
    c. Click **OK**
13. Click **Save & Run**
    a. Set the report name to **Young Campers in the Wilderness**

b. Set the report unique name to **Young_Campers_in_the_Wilderness**

c. Set the report folder to **Camp Management Reports**



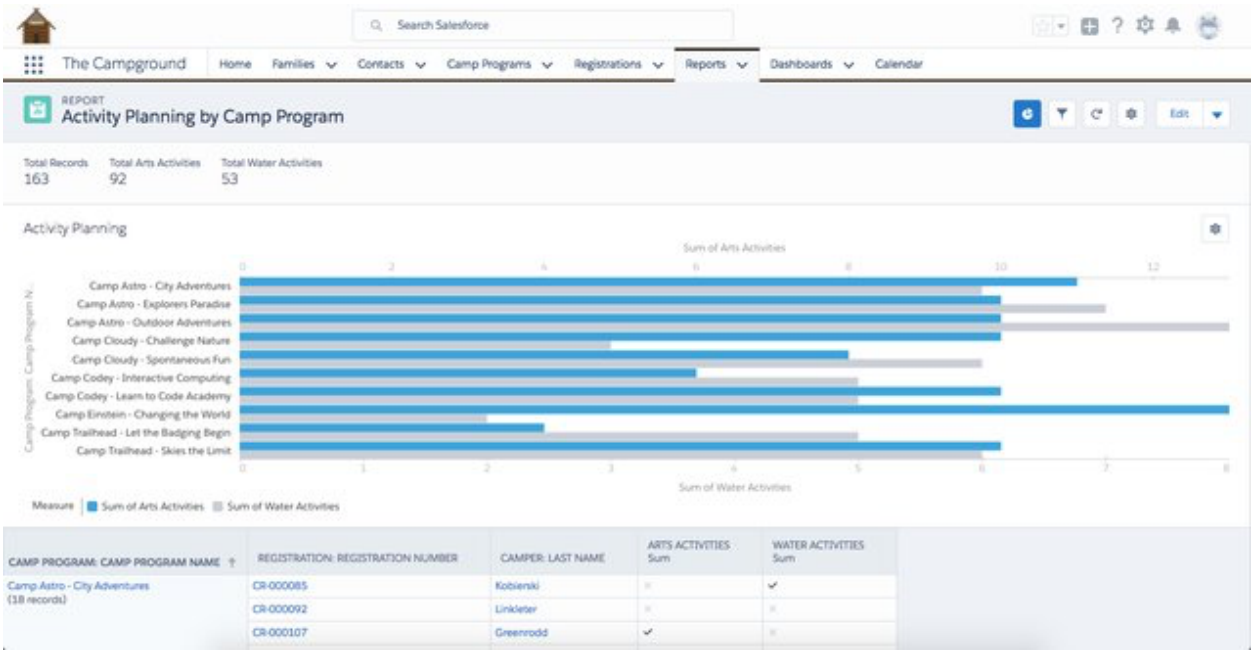
You now have a report that shows the campers from oldest to youngest, registered in a camp program in the Wilderness!

Next, let's build a summary report for your app.

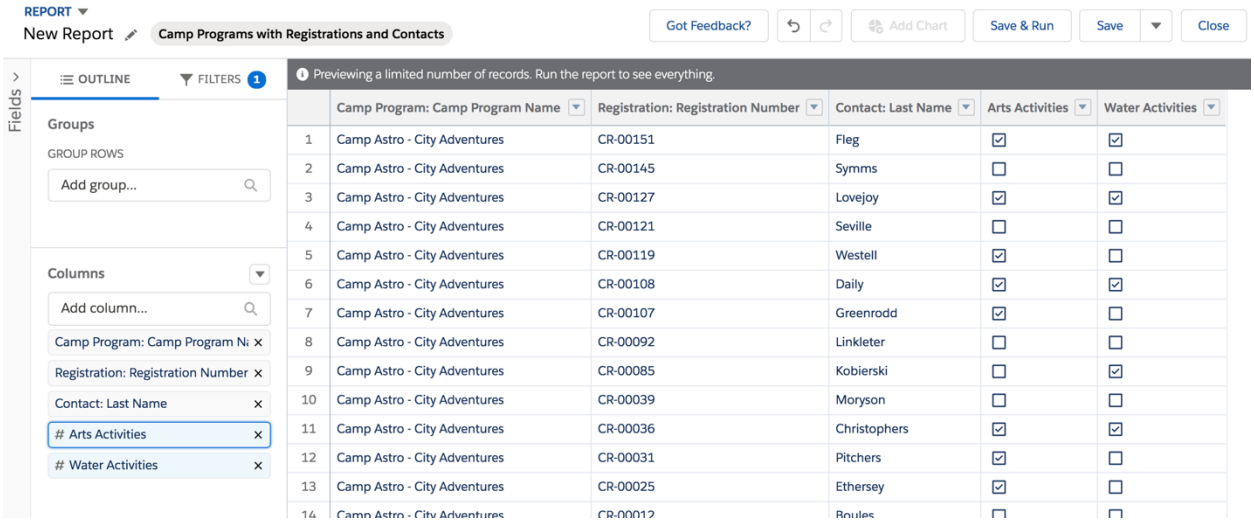
Activity 2: Create a Summary Report

Camp managers also want to know how many supplies they need for camps based on campers registered in special activities.

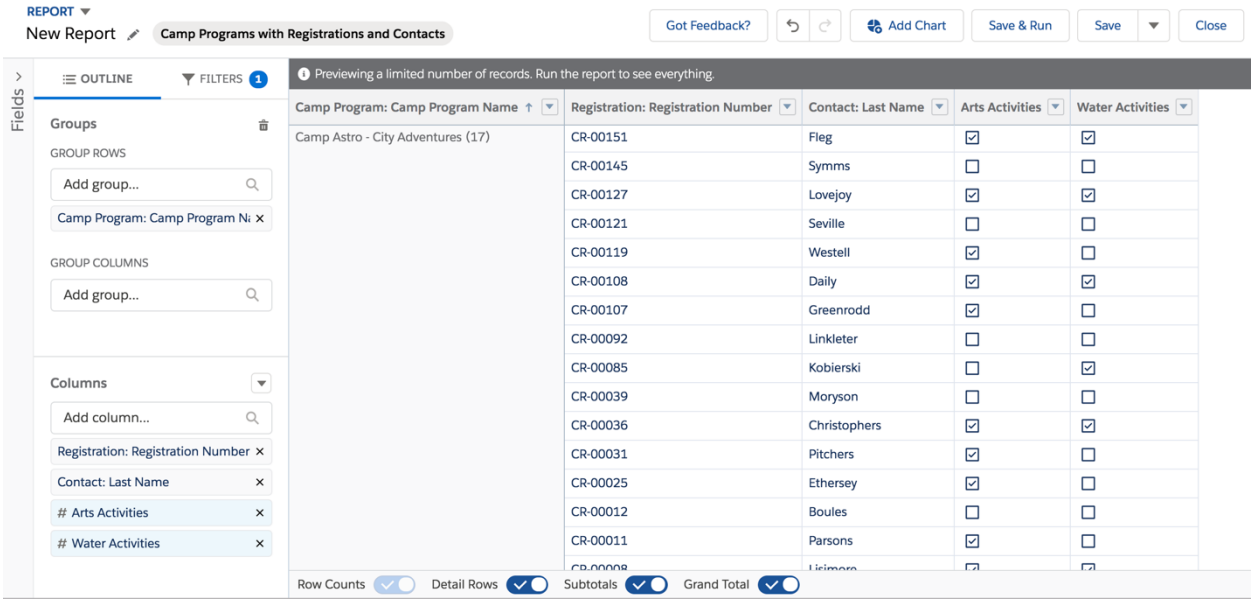
Let's create a report that provides them this information. We want a report that looks a bit like this:



1. Click on the **Reports** tab at the top of the page
2. Click **New Report** in the top right corner
3. Search for report type and type **Registrations**, and select **Camp Programs with Registrations and Contacts**
4. Click **Continue**
5. Under the Outline tab, in the Columns section, search and select **Arts Activities** and **Water Activities**



6. Drag the field **Camp Program: Camp Program Name** from the Columns section into the Groups section, under **Group Rows**



7. Click **Save & Run**

    a. Set the report name to **Activity Planning by Camp Program**

    b. Set the report unique name to **Activity_Planning_by_Camp_Program**

    c. Set the report folder to **Camp Management Reports**

8. Click on the **chart** button ( ) at the top of the report

9. Click on the **cog** button ( ) in the chart area

    a. Set the display as to **Horizontal Bar Chart**

    b. Set chart title to **Activity Planning**

    c. Set X-Axis to **Sum of Arts Activities**

    d. Click **+Measure**

    e. Set the second axis to **Sum of Water Activities**

    f. Set legend position as **Bottom**

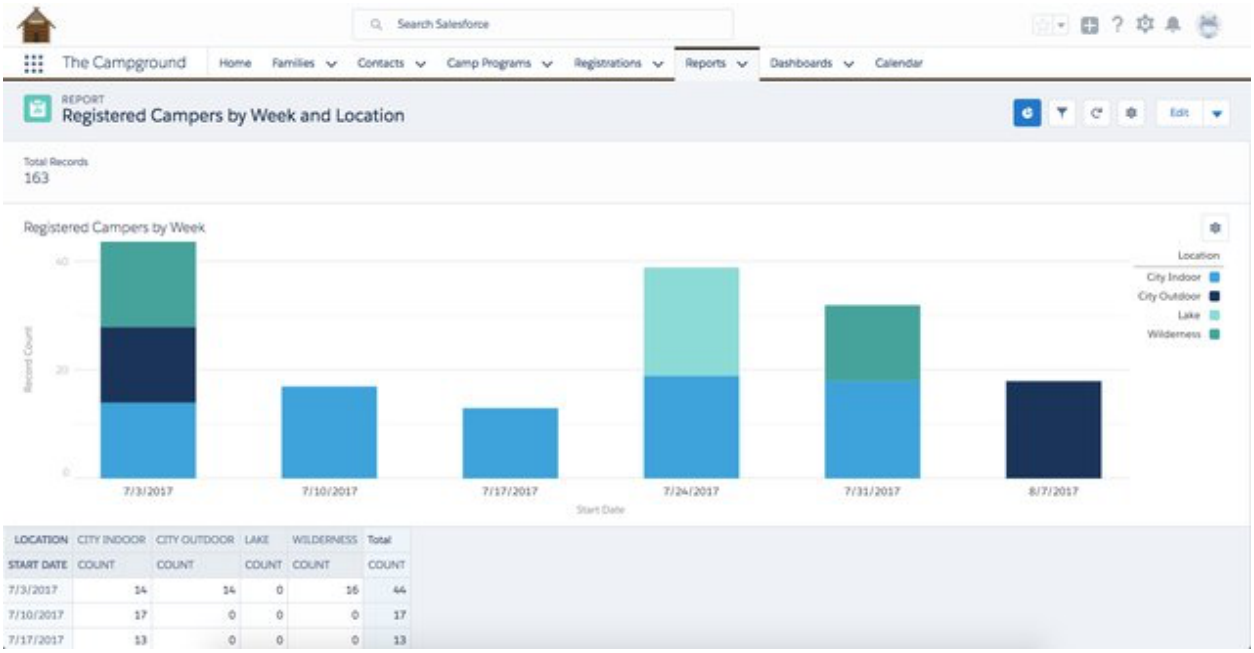
10. Click the **caret** button ( ) at the top of the report, and click **Save**

Now camp managers have easy access to a report to help them prepare for each camp!
Next, let's build a matrix report.

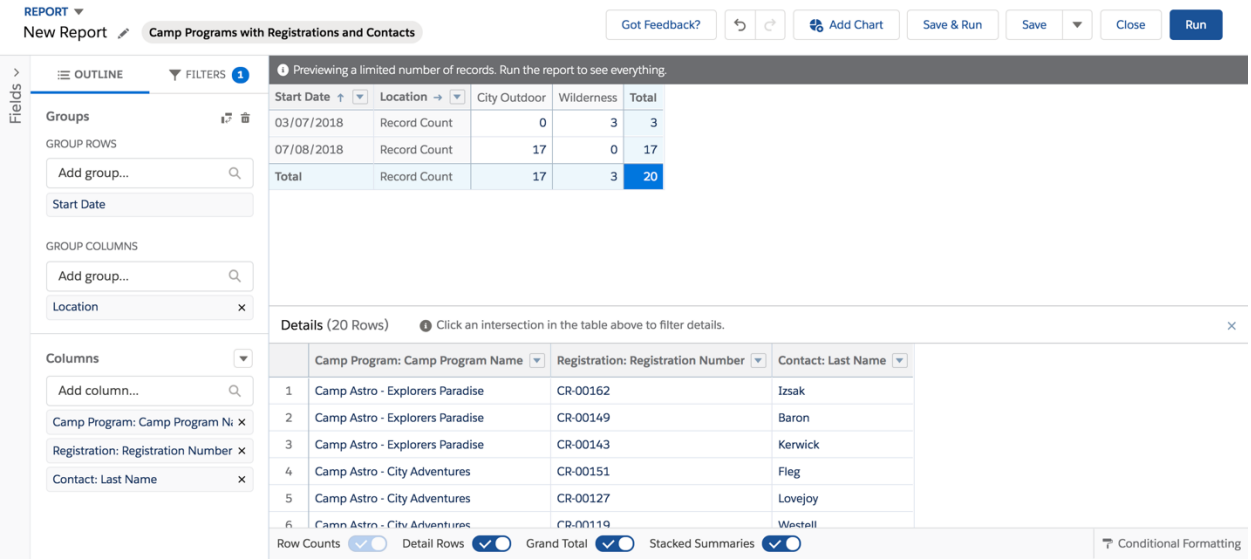
Activity 3: Create a Matrix Report

As camp administrators, you might want to plan your hiring based on the number of campers registered each week. In addition, you might want to hire specific staff based on where they will be working. Let's create a report that will provide this insight.

We want a report that looks like this:



1. Click on the **Reports** tab at the top of the page
2. Click **New Report** in the top right corner
3. In the quick find search box, search for **Registrations**, and select **Camp Programs with Registrations and Contacts**
4. Click **Continue**
5. Under the Outline tab, in Group Rows search, find and select **Start Date**
6. In the Group Columns search, find and select **Location**



7. Click **Save & Run**

    a. Set the report name to **Registered Campers by Week and Location**
    b. Set the report unique name to **Registered_Campers_by_Week_and_Location**
    c. Set the report folder to **Camp Management Reports**

8. Click on the **Add Chart** button ( ) at the top of the report

9. Click on the **cog** button ( ) in the chart area

    a. Set the display as to **Stacked Column Bar Chart**
    b. Set chart title to **Registered Campers by Week**
    c. Set Y-Axis to **Record Count**
    d. Set legend position as **Right**

10. Click the **caret** button ( ) at the top of the report, and click **Save**

Congratulations, you have now finished creating your reports! Let's complete your reporting by building a dashboard to show your summary and matrix report for quick viewing.

Extra Credit Activity: Using Formulas in Reports

We want to know the number of days left until the camp program starts, so we can keep an eye on which programs need our attention.

1. In the Column section of your report builder, click the caret button ( ) and select **Add Row-Level Formula**
2. In the Column Name field, enter **Days Until Program Start**
3. Leave the output type as **Number** and change the decimal points to **0**
4. In the field section on the left, find **Start Date**, select and insert this into the formula box on the right. Enter or click '-' and type TODAY().
5. Your formula should look like this:

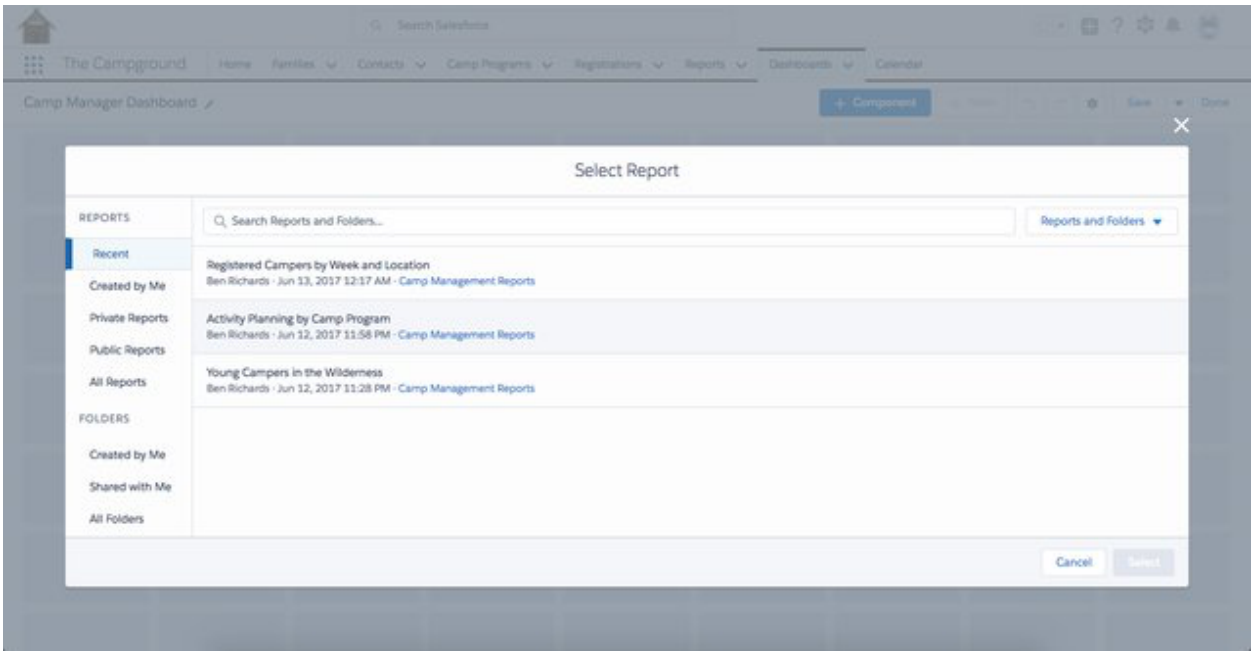
   = START_DATE - TODAY()
6. Click **Apply**

Your formula column will be added to your report. You can move this column around if needed.

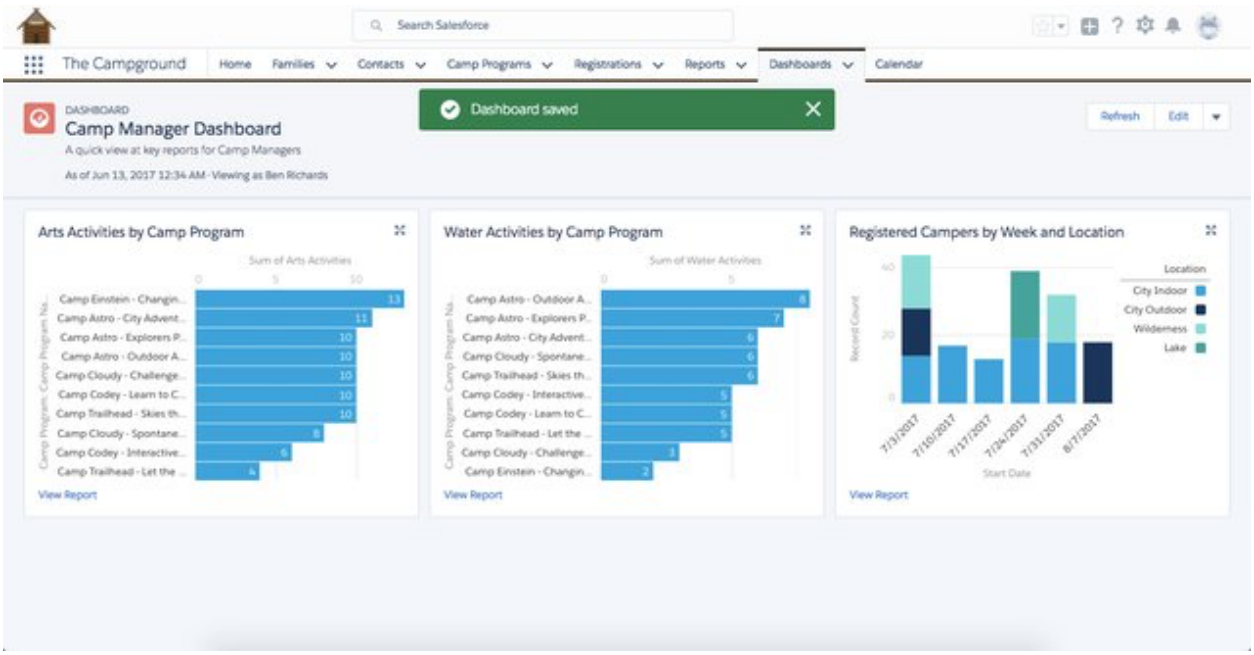
Activity 4: Create a Dashboard

As an administrator, you will want to make sure that your users have easier access to viewing report data. Let's create a Camp Manager Dashboard that has the two key reports you have built.

1. Click on the **Dashboards** tab at the top of the page
2. Click on the **New Folder** button
3. Set the name a **Camp Management Dashboards** and press tab to automatically set Folder Unique Name to **Camp_Management_Dashboards**
4. Click on the **New Dashboard** button
5. Set the name as **Camp Manager Dashboard**
6. Set the folder to **Camp Management Dashboards**
7. Click **Create**
8. Click **+ Component** button
   a. Select **Young Campers in the Wilderness**
   b. Edit Component and select the **show subtotals** checkbox
9. Click **+ Component** button
   a. Select **Activity Planning by Camp Program**



   a. Click **Select**
   b. Set X-Axis to **Sum of Arts Activities**
   c. Set title to **Arts Activities by Camp Program**
   d. Click **Add**
10. Click **+ Component**
   a. Select **Activity Planning by Camp Program**
   b. Click **Select**
   c. Set X-Axis to **Sum of Water Activities**
   d. Set title to **Water Activities by Camp Program**
   e. Click **Add**
11. Click **+ Component**
   a. Select **Registered Campers by Week and Location**
   b. Click **Select**
   c. Set display as **Stacked Vertical Bar Chart**
   d. Set X-Axis to **Start Date**
   e. Set stacked by to **Location**
   f. Set sort rows by **Label Ascending**
   g. Set title to **Registered Campers by Week and Location**
   h. Click **Add**
12. Rearrange the Dashboard by dragging the components to the top row
13. Click **Save** at the top of the page
14. Click **Done**



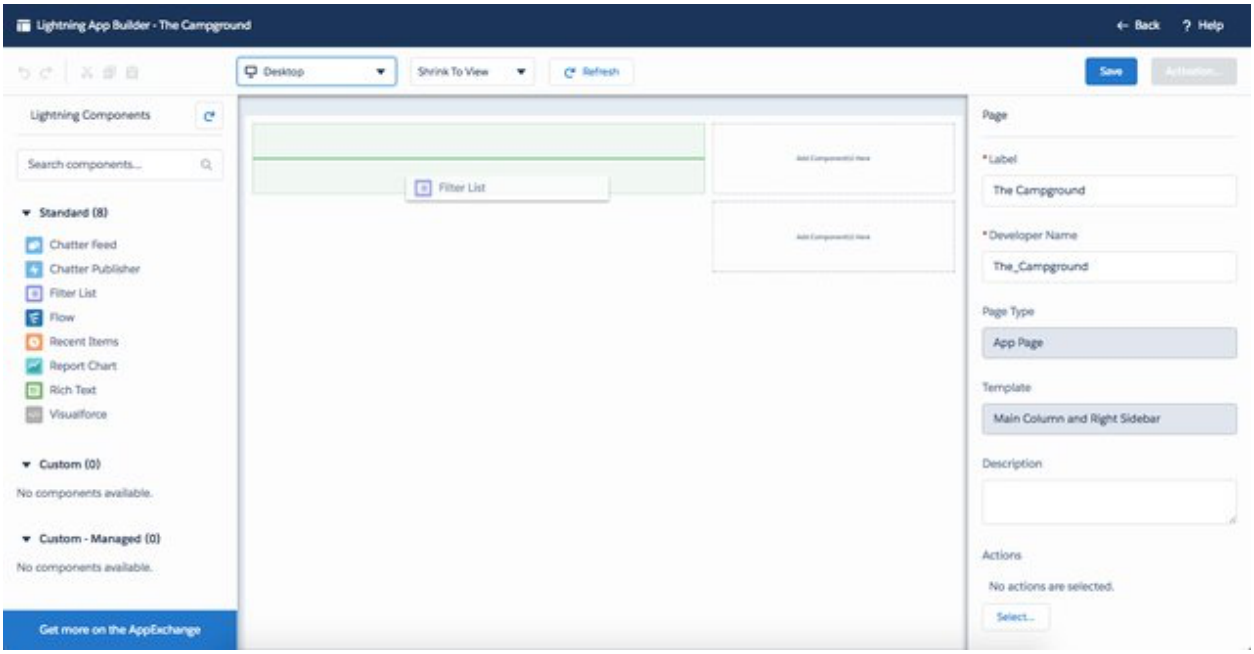
Awesome! You now have a dashboard that camp managers can use to manage their camps.

Extra Credit Activity: Building an App Page for Camp Management

Dashboards are the gold standard in organizing and sharing reports within Salesforce. However, they have their limits – dashboards can only display report charts, no other information. As an administrator, you have a secret tool in your back pocket – app pages!

App pages allow you to create a page in your application that is tailor made for your use case, that can includes reports, list views, rich text, and other components. Let's explore how you can build an app page.

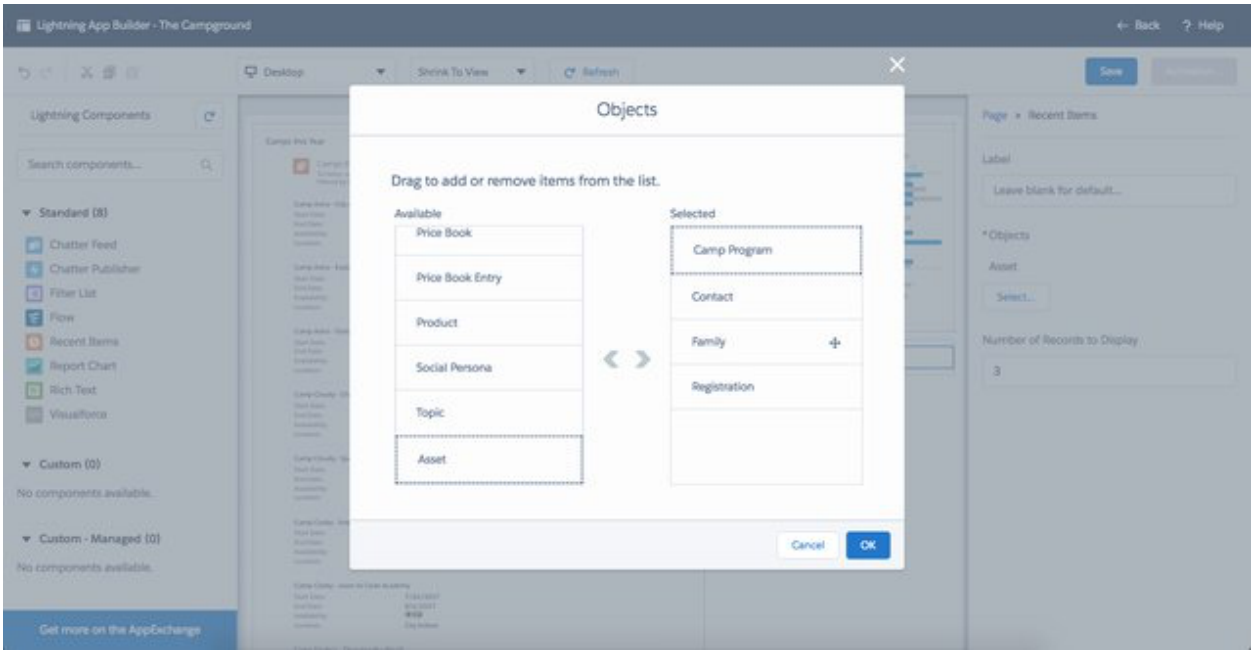
1. Click on the Cog icon ( ) in the top right of the page, and click **Setup**
2. In the Quick Find search in the left navigation, start searching for **App Builder**, and select the menu link **Lightning App Builder**
3. Click on **New**
4. Select **App Page**
5. Set the name to **The Campground**
6. Select the template **Main Region and Right Sidebar** and click **Finish**
7. From the Lightning Component toolbox, drag the **List View** component into the larger area



   a. In the properties toolbar on the right, set the object to **Camp Program**
   b. Set the filter to **Camps This Year**
   c. Set the number of records to **10**
8. From the Lightning Component toolbox, drag the **Report Chart** component into the upper side column
   a. In the properties toolbar on the right, select report **Activity Planning by Camp Program**
   b. Select the checkbox for **Show Refresh Button**
9. From the Lightning Component toolbox, drag the **Recent Items** component into the lower side column

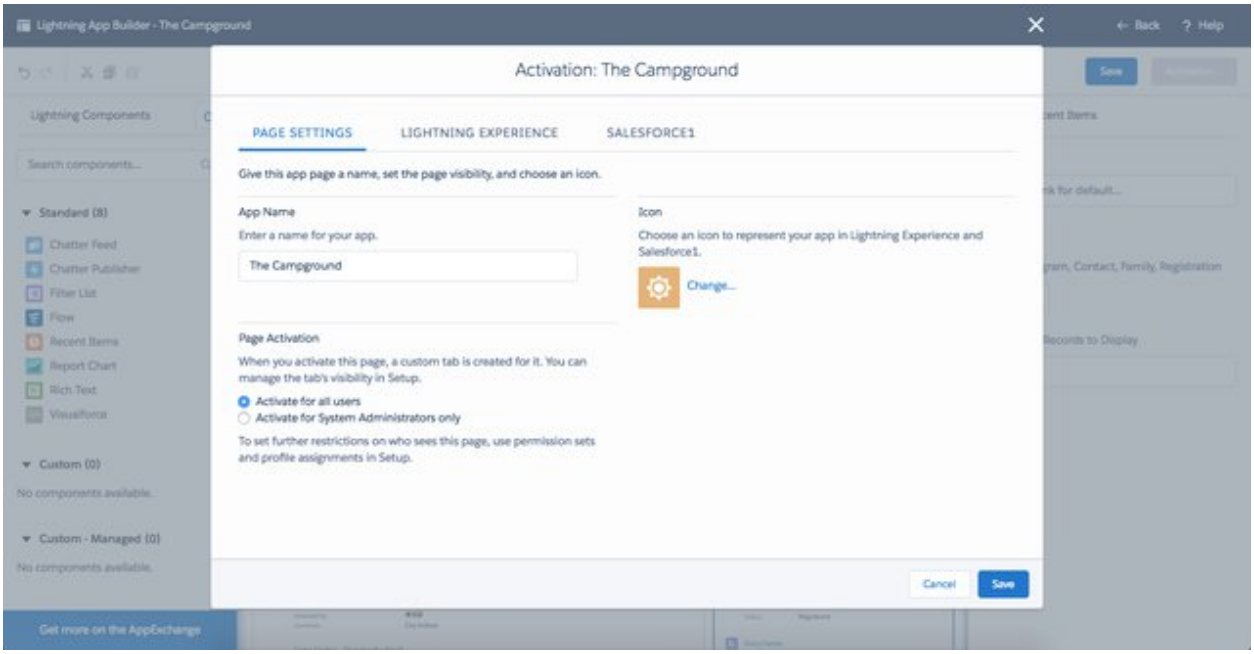
a. In the properties toolbar on the right, click **Select**

b. Deselect Asset object, and select **Camp Program**, **Contact**, **Family**, and **Registration**



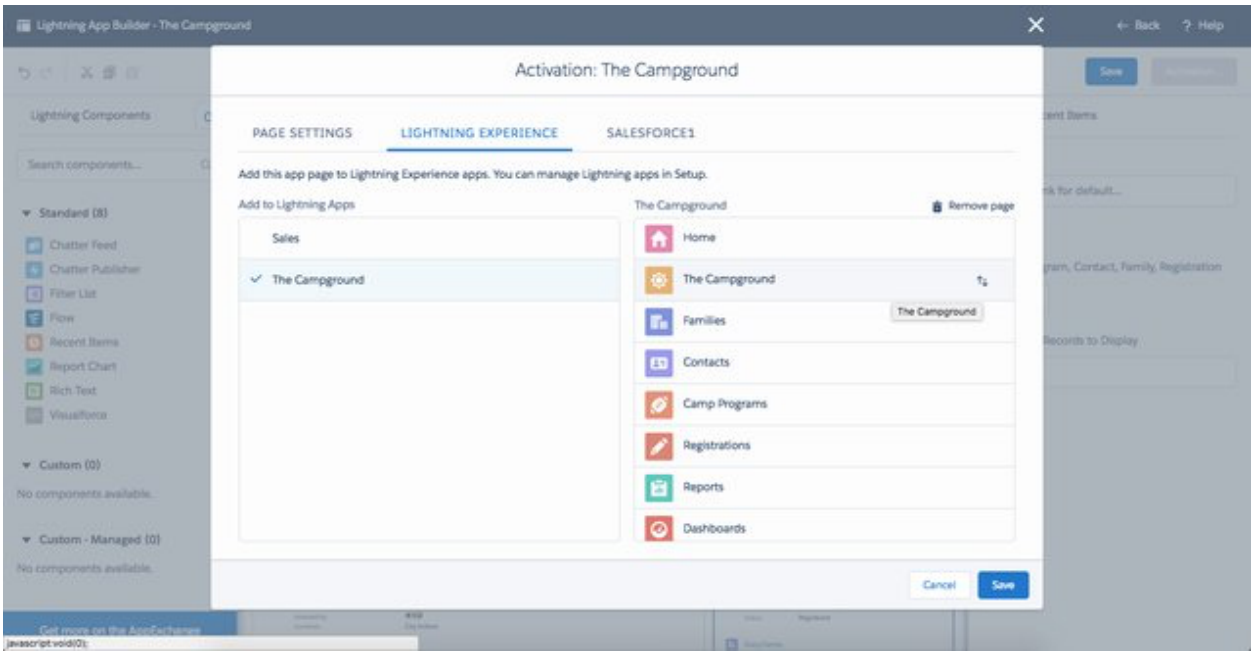
10. Click **Save**, and click **Activate**

11. Under Page Settings, change the icon to the **Sun** ( )

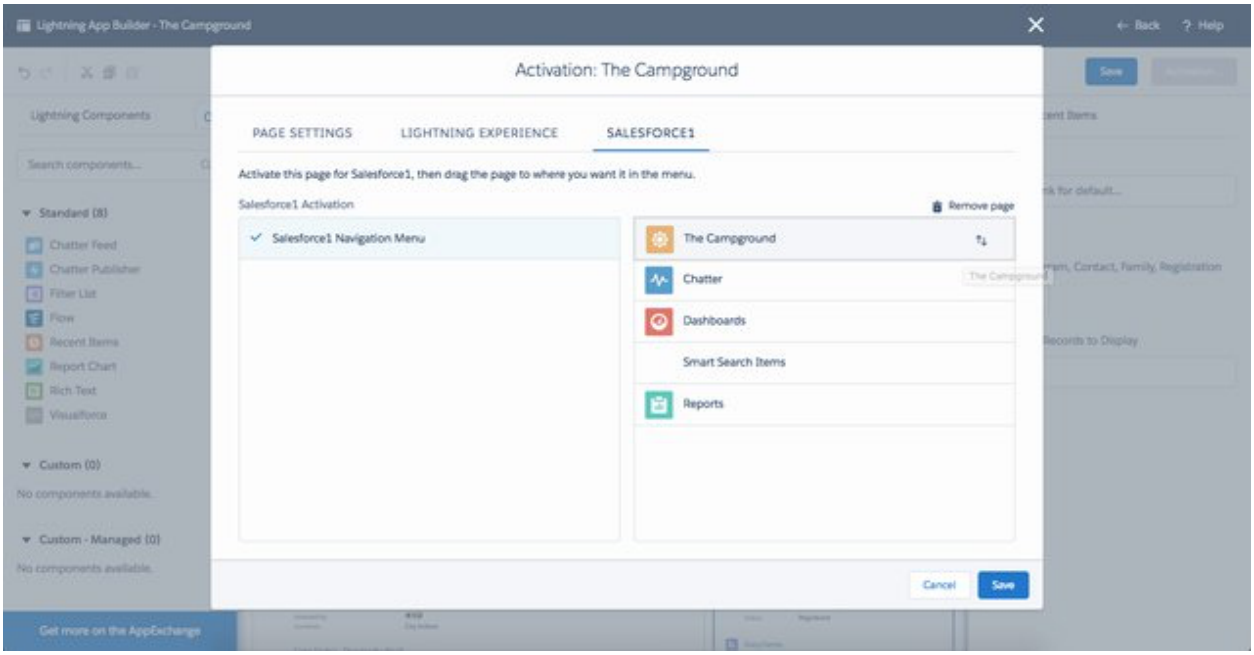


12. Click the **Lightning Experience** tab

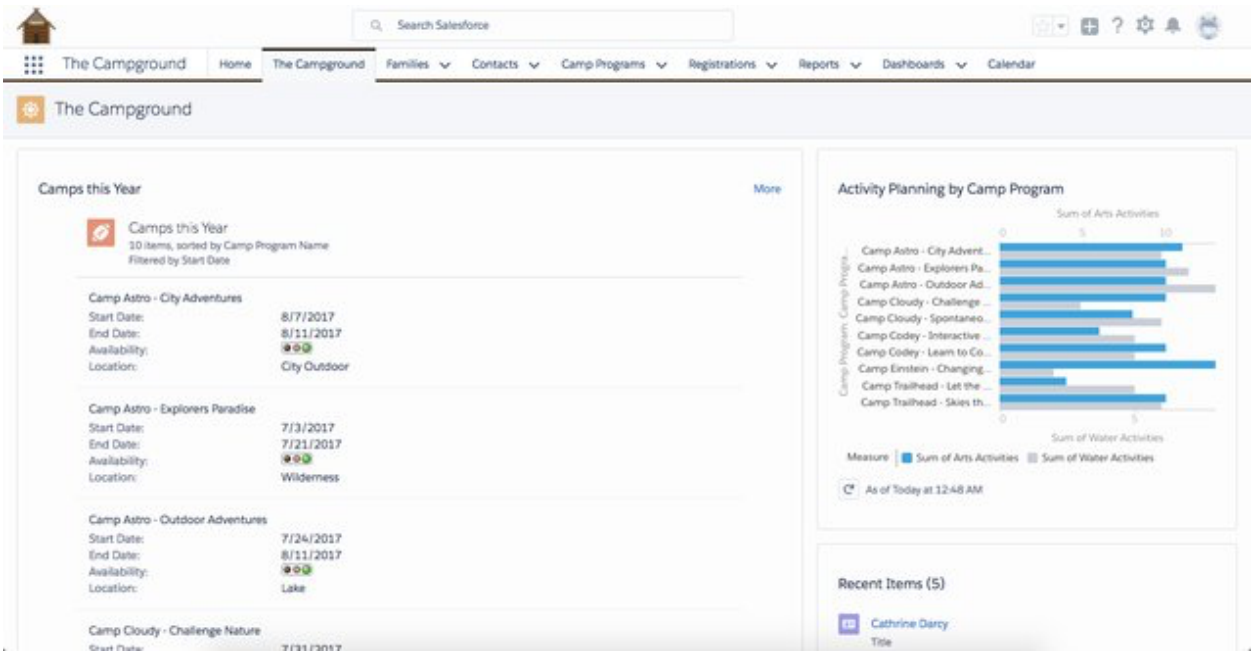
    a. Select **The Campground** and click **Add page to app**



13. Click the **Salesforce Mobile** tab
    a. Click **Add page to app**
    b. Rearrange **The Campground** to the top of the list



14. Click **Save**, then click **Back**
15. Click the App Launcher logo ( ) in the top left of the page, and select **The Campground** App
16. Click on **The Campground** tab at the top of the page and review your custom app page!



You have now created a specific app page for your camp management application. Similar to the home tab, this is a one-stop shop to understand everything camp management!

Extra Credit Activity: Optimizing the App for Other Devices

We also have the option to change the app page for a mobile view. Now you can further tailor your pages to a mobile use case, prioritising the information that your users will need most when out in the field.

1. From the Campground Tab, click on the cog icon ( ) and select **Edit Page**
2. Click on **Tablet - Portrait**
3. Drag the **Chatter Feed** to go above the Camp Program component.
4. Move the **Recent Items** component above the Chatter Feed.

Now Salesforce is optimized for your users depending on how they use it on each device. Whether it's on their phone, tablet and desktop - it makes it easier for your users to get access to information wherever they are.

Wrap-up: Additional Resources

Well your adventure is over for today, but it's not finished. As a Salesforce administrator, this is the start of a rewarding journey in your career. Here are some resources that you should check out:

- **Certifications** – There are a number of certifications that you can get to showcase all your Salesforce knowledge. Check out http://certification.salesforce.com/home for details. We recommend starting with the "Administrator" Certification, followed by the "App Builder" and "Advanced Administrator" Certifications.

- **Admin Resources** – Check out the Salesforce Admin Community, where you can work with and bounce ideas off of fellow admins: https://admin.salesforce.com/

- **Developer Resources** – Want to amp your Salesforce game into the programmatic? Check out https://developer.salesforce.com/ to find a wealth of resources to get you well on your way

- **Circles of Success** – Have questions about how best to accomplish a use case, check out a circle of success to chat with a Salesforce customer success resource (https://success.salesforce.com/featuredGroupDetail?id=a1z3A000002vaXbQAI)

- **Dreamforce** - The best Salesforce event of the year is our annual conference in San Francisco. We bring together inspirational speakers, customers you can learn from, hands-on training workshops, and announce our most exciting product updates.
  Talk to your Account Executive about getting your passes, and learn more here:
  https://www.salesforce.com/dreamforce/

- **Trailhead** – We saved the best for last...
  If you enjoyed this hands-on workshop, head on over to Trailhead (https://trailhead.salesforce.com/) for more self-paced learning with informative modules, hands-on exercises, and 'projects' across a range of topics.

  We recommend these Trails to get started:

  - Trailhead Basics
  - Admin Beginner
  - Build Your Career in the Salesforce Ecosystem

On behalf of all of us at Salesforce, thank you!