



Business Systems Innovation Labs

Lab 2a Pre-flight Checklist

“No Sh**, Sherlock—The Case of the Lost Integrity”

Halloween’s approaching & Max is back with another episode & a mystery.

Prep: What do you need to start?

- ☑ If you didn’t do Lab 1a & 1b, that’s ok. Just do Steps 5-36 of Lab 1b and you’re good to go.
- ☑ If you didn’t get the Average Amount & Equity by Type report created successfully in Lab 1b, np. When you hit Step 52 below, just refer to the embedded screencap showing the report.

Learning Objectives: What to “get”

- ☑ Realize how devastating errors in data can be & learn one way we strive to prevent them.
- ☑ See how duplicate data (redundancy) threatens system integrity (“truth”).
- ☑ Get a feel for working with users to understand them & build to their needs.
- ☑ Get how systems must be evolved, like living things, to adapt to change.
- ☑ Recognize that *there’s an underlying logical structure* in how data items relate to each other, based on how users think of the data—to make an app work right for them, you have to set up (model) the logical record structure according to their thinking.

Deliverables: Get your points

There are three points marked to stop & take a screencap (or pic) to submit for credit:

- 1 After Step 17, you should see the Pitch details screen with an error message displayed next to the **Equity Percentage** field where you tried to enter a number over 100.
- 2 After Step 51, you should be viewing the Seeing Triple view you created and just the three records you entered for Spray & Pray, just like the screencap in the blog.
- 3 After Step 113, you should see the Pitch detail for 3rd meeting w/Spray & Pray (\$800,000, 35%), along with the related list of three meetings below, just like the screencap in the blog.

Just make sure your name appears on every screencap! Just hit the little character icon at the top right corner for a popup that shows your name. If it covers some of your work, np—just zoom out your browser until the popup doesn’t cover anything important. (Command-minus for Macs; Control-minus for Windows)

Tips: Get more

Remember: Your goal is NOT to learn Salesforce! It’s to learn the “why” & “how” of tech supporting biz. Learning something about Salesforce is a nice side-effect, but Salesforce is just a tool to get to the real goal—*understanding the ideas.*

Resources: Get some help

Stuck? You can probably fix it quick yourself at the [Help FAQ](#) at [MaxzPlace](#). If not, post to the [Help Forum](#).

Max's Distinctive, Impressive BizTech Student Blog

Friday, October 7, 2019

No Sh**, Sherlock – The Case of the Lost Integrity

So, I've got a story for you—a mystery, actually. Turned out my killer app needed...some help. As of today, it's fixed and it really is pretty killer now, but fixing it killed me, almost. I survived, but not the M&M's. They were supposed to be for the trick-or-treaters, but I got tricked, so treats were in order! Check this out...



Seeking Validation

It started out with the smallest thing. Riley was doing her stuff, pitching investors, using my app... I was helping her out more & more with all kinds of stuff. Life was good. Until one day, I went back into SF, just browsing the database to make sure all was well & I found a **Pitch** record with an **Equity Percentage** of 125%.

So, I'm not exactly a math wiz but—percentages? Pretty sure those are not supposed to run over 100. Sorry, Coach Debbie (8th grade soccer).

So, I tracked down Riley & turned out she had just mistyped it. It was supposed to be 12.5% but it had been embedded there in the data awhile, probably throwing off reports, dashboards, etc and thereby throwing off Riley's strategic moves. Rats! I fixed it, but then I thought...*there must be something in SF that helps keep wrong data from getting in there bc data mistakes like that could really <bleep> things up.*

It took some extensive Googling, but I finally found it—validation rules:

1. Click the trusty old **Setup** gear icon on the top right & click **Setup** and then, on the lefthand menu, under **PLATFORM TOOLS**, click **Objects & Fields** and then **Object Manager**, under that
2. Scroll down and find **Pitch** & click it
3. On the lefthand menu, click on **Validation Rules** at the bottom and then, in the new panel that comes up, click **New** on the upper right
4. Set **Rule Name** = "Equity Percentage has to be 100 or less"
5. Look down under **Error Condition Formula**—that's where you tell what condition should trigger an error message and stop the user from adding the bad data

6. Click **Insert Field**

Pitch Validation Rule Help for this Page

Define a validation rule by specifying an error condition and a corresponding error message. The error condition is written as a Boolean formula expression that returns true or false. When the formula expression returns true, the save will be aborted and the error message will be displayed. The user can correct the error and try again.

Validation Rule Edit Save Save & New Cancel

Rule Name: Equity_Percentage_has_to_be_100_or_less

Active:

Description:

Error Condition Formula Required Information

Example: `Discount_Percent_c > 0.30` More Examples...
Display an error if Discount is more than 30%
If this formula expression is true, display the text defined in the Error Message area

Functions: -- All Function Categories
ABS
ADDMONTHS
AND
BEGINS
BLANKVALUE
BR

- That should bring up a dialog box with two picklists. On the left one, **Pitch >** should be selected/ highlighted already. That brings up **Pitch** fields on the right, so you can choose the one you want to make the rule about.
- Pick **Equity Percentage** and you'll see a box pop up confirming your choice
- Click **Insert**

Insert Field Close

Select a field, then click Insert. Labels followed by a ">" indicate that there are more fields available.

Pitch >	Created Date	You have selected: Maxz_Equity_Percentage_c Type: Percent API Name: Maxz__Equity_Percentage__c <input type="button" value="Insert"/>
\$ObjectType >	Email	
\$Organization >	Equity Percentage	
\$Profile >	Expected Value	
\$System >	Follow Up	
\$User >	Investment Amount	
\$UserRole >	Last Modified By >	
	Last Modified By ID	
	Last Modified Date	

- Now back on the big empty formula text box SF should have inserted **Maxz_Equity_Percentage_c** in there for you (that's how SF refers to it internally)
- Now you can click on **Insert Operator** to drop down a menu and select **> Greater Than** and SF inserts the symbol into the formula box for you
- Now you have to type for yourself, sorry—just the number “1.00” is all you need—that's 100%, mathematically speaking

So it should read “**Maxz_Equity_Percentage_c > 1.00**” when you're done. (Click **Check Syntax**, just below the text box, to make sure you got it right.)

Error Condition Formula

Example: `Discount_Percent_c > 0.30` More Examples...
Display an error if Discount is more than 30%
If this formula expression is true, display the text defined in the Error Message area

`Maxz_Equity_Percentage_c > 1.00`

Functions: -- All Function Categories
ABS
ADDMONTHS
AND
BEGINS
BLANKVALUE
BR

ABS(number)
Returns the absolute value of a number, a number without its sign
[Help on this function](#)

- Now skip down to the **Error Message** text box and enter something cheeky like “Percentages are 100 or less and so is your IQ, apparently!” (For Riley, I did NOT enter that.)
- Finally, find **Error Location** at the very bottom & select **Field** to bring up a new dropdown menu
- Pick **Equity Percentage** so the error message will appear right there, next to the bad value, when a user tries to enter it.

Error Message

Example:

This message will appear when Error Condition formula is true

Error Message

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

Error Location Top of Page Field

- Click **Save**

Now try it out to make sure it's working:

- Use the **App Launcher** again to go to **Marketing** and hit your **Pitches** tab and click **New** and then make up something to fill in for **Business Name** & ignore the other fields but enter a number over 100 for **Equity Percentage** and click **Save**

New Pitch

Review the errors on this page.

Information

Pitch ID

Owner Max Flanagan

* Business Name

Follow Up

Type

Investment Amount

Equity Percentage

Percentages are 100 or less and so is your IQ, apparently!

Cool, right? Doesn't block every kind of mistake but it helps, at least. (You could add another rule to keep out percentages less than zero but that feels like overkill—you'd have to be lame. Definitely not Riley.)

- For now, just click **Cancel** to skip the edit once you're done admiring your work :-)

So, no more bad data, right? Yeah, that's what I thought, too. Calm before the storm, bc that's just when something weird caught my eye—two **Pitch** records with the same **Business Name**. I was like...come on, seriously?

But yeah, same **Address** too. How is that even possible? No way she forgot and put in the same pitch twice. Then it *really* got weird.

The **Investment Amount & Equity Percentage** values were different. **Pitch Dates** and **Follow Up** dates too. But both had the same contact info, ie **First Name, Last Name, Mobile**, etc which, by now was plenty weird enough, but then it went astro-weird on me—the **Pitch Date** for one was the same as the **Follow Up** date for the other. I know!

I was like the dude in **Jaws**—“*This was no typing accident!*” Whatever this was, it went way beyond validation rules. Something was out there mangling my data. I didn’t know it then, but I would soon find out—Killer Clones.

Data Redundancy (aka “Evil Twins”)

So, I learned something new (the hard way)—turns out when you pitch an angel or VC firm, it takes awhile for them to warm up to giving you a bunch of their money (go figure!) and so you might have multiple meetings with them which (unfortunately) I hadn’t really accounted for when setting things up (d’oh!). Thus, there was a moment, like in scary movies, when something hideous suddenly appears and you scream & have a heart attack. Except this was way worse. Ok, pretend you’re Riley:

So today’s 10/7/2019. You (Riley) just got out of your first meeting to pitch a VC firm named “Spray & Pray Ventures,” located at 2870 Sand Hill Road, Palo Alto, CA 94304. You met with Julia Chavez (510-403-8995, julia.chavez1981@gmail.com). Your meeting notes say “She thinks it’s worth considering at the \$600,000 level (yay) for 30% equity, but she wants to see some more work on the revenue model. Estimated closability: 60%. Meeting again on the 21st.”

Now you’re back in your car, you pull out your phone and you’re creating the new record (but just use your laptop for now—it’s easier):

19. Click on your **Pitches** tab and then click **New** to create a record for this new pitch that began with that first meeting today with Julia

Form fields and values:

- Pitch ID: P-010
- Owner: Max Flanagan
- * Business Name: Spray & Pray Ventures
- Contact Name: Julia Chavez
- Type: VC
- Mobile: 510-403-8995
- Investment Amount: \$600,000.00
- Email: julia.chavez1981@gmail.com
- Equity Percentage: 30.0%
- Follow Up: 10/21/2019
- Pitch Date: 10/7/2019
- Comments: She thinks it's worth considering at the \$600,000 level (yay) for 30% equity, but she wants to see some more work on the revenue model. Estimated closability: 60%
- Closability: 60%

Buttons: Cancel, Save & New, Save

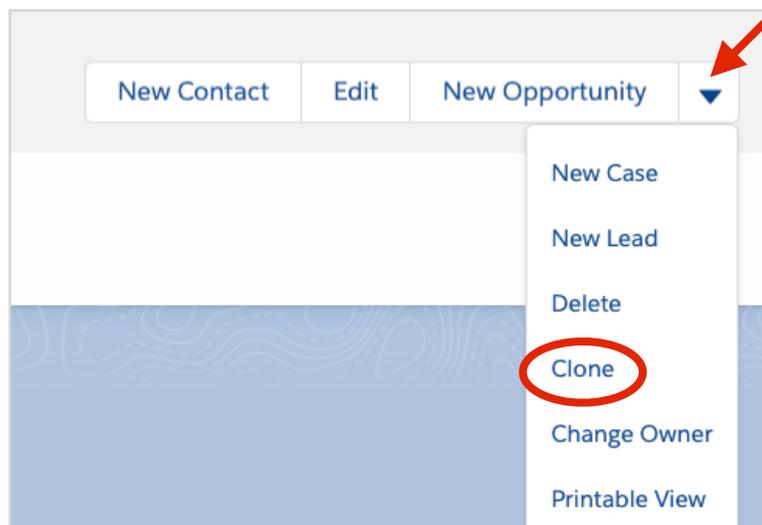
20. Fill in the field values using the info above (“Spray & Pray”, etc) & for **Comments** enter the whole part above about “She thinks...the revenue model.” (you can resize the **Comments** textbox, if you want, by dragging the little diagonal lines on its lower right corner)
21. When all your data is in, click **Save** and then just stay on that **Pitch Detail** screen for now

Apparently, for some unknown reason, these investor-types like Julia seem to be all obsessed with business plans, especially the revenue model part (ie “where is the revenue going to come from?”) and Julia thought yours needed work so you got two weeks to fix it before the 2nd meeting.

Now today’s the 21st, you just had your 2nd meeting. You showed Julia the new rev model & she liked it, but she’s kinda snarky. She offered to up their investment to \$750,000 but... now she says they want a 40% equity stake instead of 30%. Hey! That’s 10% less for you to bargain to other investors (or for you to split on payday with your geeky co-founder someday). Maybe 10% doesn’t seem like much now, but if your company gets bought out by Google someday for \$500M, Spray’s extra 10% is \$50 million more for them & \$50 million less for you, your co-founder & your other investors. Ouch! You tell them you’ll need to discuss it with your co-founder & get back to them in about a week. You set a follow up meeting for 10/31/2019.

Meeting’s over. Back in your car, you grab your phone to save your 2nd meeting info, fast—without typing in all the same stuff again. Wouldn’t it be nice if you could just clone the one from the first meeting and then change a few things? Well you can!

22. Click the down-arrow next to **New Opportunity** on the upper right and hit **Clone**



What you see now is a new **Pitch** record identical to the one you made before and you can just change whatever:

23. Change **Pitch Date** to the pretend date for today, 10/21/2019
24. Change **Follow Up** to the pretend next week meeting date, 10/31/2019
25. Change **Investment Amount** and **Equity Percentage** to show the new current terms of the deal (\$750,000 & 40%)
26. Raise **Closability** to 70%
27. For **Comments** enter “She liked the new revenue model, but now she’s driving a hard bargain!”
28. Click **Save**

See *that's* how Riley wound up with two **Pitch** records for one firm. Should be fine, right? Uh...no.

Fast forward to 10/31. You clone the 2nd meeting record to make one for today's 3rd meeting:

29. Just like before, click the down-arrow next to **New Opportunity** and hit **Clone** again

In this 3rd meeting, you proposed another, even better revenue model fix (3rd version) along with better deal terms (for you), upping their investment to \$800,000 and lowering their equity to 35%. Julia says they'll think it over and she wants another meeting on 11/15/2019. And BTW, they're moving their offices—the new address will be 455 Castro Ave, Mountain View, CA 94041.

Now edit your 3rd meeting record accordingly:

30. Update **Address** to the new Mountain View location above so you have it for the next meeting
31. Change **Pitch Date** to 10/31/2019 (pretend today)
32. Change **Follow Up** to 11/15/2019 (next meeting date)
33. Enter the new current terms (**Investment Amount** = \$800,000; **Equity Percentage** = 35%)
34. Lower **Closability** to 65% (because you're pushing back a little)
35. Set **Comments** to "Counter-offered her. Hah! Hope she doesn't call my bluff."
36. Click **Save**

Still good? Yeah, not so much.

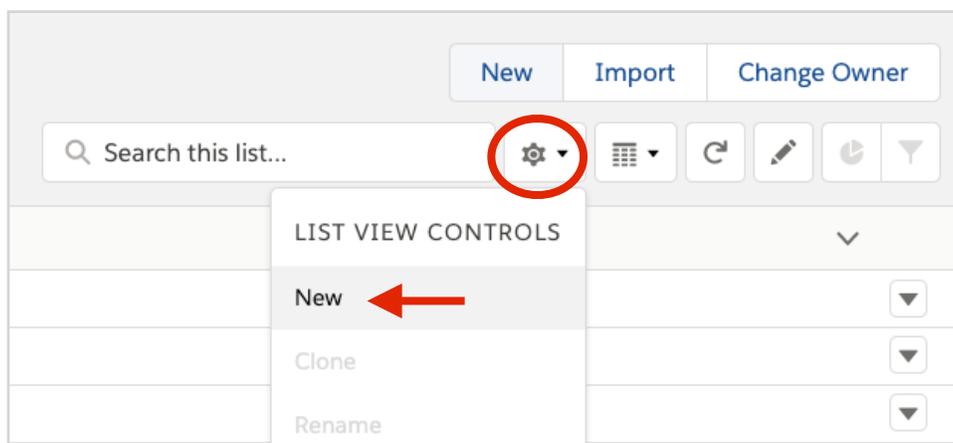
See, the **Pitch** record is trying to record things about the pitch, which is pitched to one firm with one type and one address, etc. But it's also trying to record things about each of the *multiple* meetings that make up a single pitch, like the dates of all the meetings for that pitch, comments, and who you met with at each of those meetings, etc. Mixing one-pitch things in the same record structure with several-pitch things is where I made my big mistake...and took you along for the ride. Sorry :(

Let's take a look at the records you entered, listed next to each other:

37. Click your **Pitches** tab

See your three Spray & Pray records? Try making a new view, just for them, to get the full effect:

38. Click the tiny gear icon (NOT the **Setup** gear) to drop down the **LIST VIEW CONTROLS** menu & select **New**



39. For **List Name** enter “Seeing Triple” and click **Save**
40. In the **Filters** panel on the right, click **Add Filter** (blue)
41. In the form panel that opens up, under **Field** use the dropdown to change **Address** to **Business Name**
42. Below that, for **Operator**, use the dropdown to change **equals** to **contains**
43. Under **Value**, on the same row, enter “Spray” and click **Done**

The screenshot shows a filter configuration window. On the left, there are three dropdown menus: 'Field' (set to 'Business Name'), 'Operator' (set to 'contains'), and 'Value' (set to 'Spray'). The 'Add Filter' button at the bottom right is circled in red. A red arrow points from the 'Save' button in the filters panel to the right.

44. Then click the blue **Save** button in the **Filters** panel
45. Next, to add some columns, click the tiny gear again and click **Select Fields to Display**
46. In the popup, under the **Available Fields** list on the right, click to highlight **Business Name** and click the right-arrow in the middle to move it over to the **Visible Fields** list
47. Repeat the last step to move **Address, Investment Amount, Equity Percentage, Closability, Pitch Date** and **Comments** over to the **Visible Fields** list too
48. If you got them in a different order somehow, you can always shift them around by clicking one to highlight it and then using the up or down-arrows to move wherever you want
49. Under **Visible Fields**, click to highlight **Pitch ID** and click the left-arrow to move it over to the **Available Fields** list
50. Click **Save** to save and display the new view with just the three Spray & Pray records
51. Click the blue Martini-glass-looking icon on the far right, above the **Filters** panel to hide it

The screenshot shows a table with 7 columns: BUSINESS NAME, ADDRESS, INVESTME..., EQU..., CL..., PITCH ..., and COMMENTS. There are 3 rows of data. A red circle with the number '2' is next to the table.

	BUSINESS NAME	ADDRESS	INVESTME...	EQU...	CL...	PITCH ...	COMMENTS
1	Spray & Pray Ventur...	2870 Sand Hill Road, Pal...	\$600,000.00	30.0...	60%	10/7/2019	She thinks it's worth cons...
2	Spray & Pray Ventur...	2870 Sand Hill Road, Pal...	\$750,000.00	40.0...	70%	10/21/2019	She liked the new revenu...
3	Spray & Pray Ventur...	455 Castro Ave, Mountai...	\$800,000.00	35.0...	65%	10/31/2019	Counter-offered her. Hah...

See any issues? For one, some records say Spray & Pray is located in Palo Alto. Others say Mountain View. At some point, somebody's going to look it up on the wrong record and wind up missing a meeting by going to the wrong location. And they'll be mad at my app (and me).

And there's a bunch of different values in the other fields for just one business. Riley said she does like to keep the dates & comments for each meeting, so she can remember the history of what went down. But she thinks of each pitch as having one current deal on the table for that one business—one **Investment Amount, Equity Percentage & Closability**, not a bunch. With all the old ones showing up on the reports & dashboard, etc, it's going to throw off her moves.

Check this out:

- Click the **Reports** tab and click the **Average Amount & Equity by Type** report you created last time you followed along (but if you don't still have the report, it's ok—just see below)

REPORT: PITCHES Average Amt & Equity by Type				
Total Records	Average Investment Amount	Average Equity Percentage		
13	\$404,615.38	25.0%		
Type ↑	Pitch: Pitch ID	Business Name	Investment Amount	Equity Percentage
<input type="checkbox"/> VC (8)	P-002	Silicon Valley Extreme Venture	\$360,000.00	12.0%
	P-003	Net Wealth Leverage Associates	\$450,000.00	18.0%
	P-004	Smart Technology Investment Partners	\$80,000.00	8.5%
	P-008	Move Over Ventures	\$100,000.00	10.0%
	P-009	Applied Investments Limited	\$320,000.00	38.5%
	P-012	Spray & Pray Ventures	\$800,000.00	35.0%
	P-010	Spray & Pray Ventures	\$600,000.00	30.0%
	P-011	Spray & Pray Ventures	\$750,000.00	40.0%
Subtotal			Avg: \$432,500.00	Avg: 24.0%

\$2,150,000

105%

Spray & Pray shows up all three times in the VC category. One record says they're asking for 30%. Another says 40%. Another says 35%. It seems to be saying they want 105% of your company! Unreal (literally). And it seems to be saying that one business is thinking of giving you \$2,150,000 (\$750,000 + \$800,000 + \$600,000)!

And the averages shown at the top of the report definitely don't mean what they seem to mean—all three Spray & Pray values are being averaged in with the other VCs.

Here's the thing, turns out you lost "data integrity". Your data's fouled up, conflicts with itself and it's telling you things that are just plain...wrong. "Ahhhhhhh...my database is lying to me!" Who needs that?

Don't feel bad—it's not your fault. My one entity (object) for all **Pitch** info, just can't deal with multiple meetings for one pitch to one business firm. This was the problem that Prof told us about before: when you don't break up the fields into the right logical structure—separate entities (objects) connected by relationships then you get multiple copies of the same data ("redundancy" aka "Evil Twins"). Then, when there's a data update, some copies get changed & others get missed & you wind up with conflicts between them.

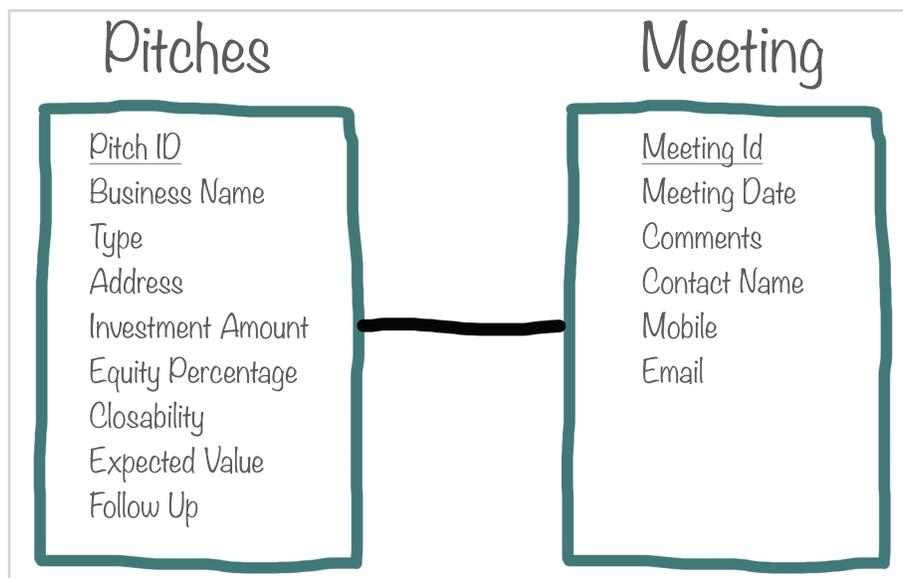
Bottom line? One value of current **Investment Amount, Equity Percentage, Closability** and current **Follow Up** date all go with the firm being pitched, just like **Business Name, Type** and **Address**. Not with the meeting. You shouldn't have to duplicate all those for every meeting you have with them. That's redundancy. That's trouble.

Solution? Make it so there's just one **Pitch** record for every pitch, no matter how many meetings have happened for that pitch. How? Take out all the fields that really go with each meeting. Take them out of **Pitch** and make a new object (**Meeting**) out of them. Done. But then how do you know which meeting records go with which firm pitch records, you ask?

Working on Relationships

Prof told us databases let you break records apart, but also keep their data linked together, using relationships. If you link **Pitch** and **Meeting** together with a relationship, every pitched firm record is connected to all its associated meeting records.

I'll draw you a picture. Prof showed us this E/R (entity/relationship) diagram format:



The line between the entities, the relationship, is supposed to have some symbols like “crow’s feet” to show the “cardinality,” meaning “how many of these go with one of these,” etc. I left them off here to give you a little quiz. Could you add them yourself? Gopher it! Haha, get it?! :D

K nice pic, but how do you do this in SF?

First, you're going to delete the Spray & Pray records you added for the 1st and 2nd meetings (NOT the 3rd). You're going to have just one **Pitch** record for every firm being pitched from now on, right? That's the whole idea. (Yeah, in a few, you'll have to re-enter some of that data again. Sorry, but...)

53. Click on your **Pitches** tab and then click the **Pitch Everything** title on the upper left and select **Seeing Triple** from the dropdown
54. For each of the records from the first two meetings, (\$600,000 and \$750,000), click on the down-arrow on the far right and, on the popup, click the blue **Delete**

Now create a new custom object named **Meeting**:

55. Click on the **Setup** gear, by the bell on the upper left & click **Setup**

56. Here's a shortcut—click the **Create** button on the upper right to get a dropdown and select **Custom Object**
57. For **Label** enter “Meeting”
58. For **Plural Label** enter “Meetings” (shows up if/when you make a tab for it)
59. **Object Name** should have autofilled already
60. For **Record Name** change it to “Meeting ID”
61. For **Data Type** select **Auto Number**
62. For **Display Format** enter “Mtg-{00}”
63. For **Starting Number** enter “1” (one)
64. Click **Save**

Now you can connect **Meeting** to **Pitch** (create the relationship) by adding a field that tells, for every **Meeting** record, which **Pitch** it goes with:

65. On the left, click **Fields and Relationships**
66. Click **New** (next to **Field Dependencies**)
67. For **Data Type**, select **Lookup Relationship** and click **Next**

The screenshot shows the 'Step 1. Choose the field type' dialog box. A red arrow points to the 'Lookup Relationship' option, which is selected. The dialog box contains the following information:

Data Type	Description
None Selected	Select one of the data types below.
Auto Number	A system-generated sequence number that uses a display format you define. The number is automatically incremented for each new record.
Formula	A read-only field that derives its value from a formula expression you define. The formula field is updated when any of the source fields change.
Roll-Up Summary	A read-only field that displays the sum, minimum, or maximum value of a field in a related list or the record count of all records listed in a related list.
Lookup Relationship	Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.
Master-Detail Relationship	Creates a special type of parent-child relationship between this object (the child, or "detail") and another object (the parent, or "master") where: <ul style="list-style-type: none"> The relationship field is required on all detail records. The ownership and sharing of a detail record are determined by the master record. When a user deletes the master record, all detail records are deleted. You can create rollup summary fields on the master record to summarize the detail records. The relationship field allows users to click on a lookup icon to select a value from a popup list. The master object is the source of the values in the list.

68. In the **Related To** drop-down menu, select **Pitch** and click **Next**
69. **Field Label** should already be showing “Pitch”
70. Below that, in **Field Name**, type in “Pitch” (or click in **Field Label** & tab to auto-fill)
71. Click the checkbox to **Always require a value in this field in order to save a record**
72. Click **Next** (remembering to pause & let the page fully load), then **Next** (pause), then **Next** again
73. Click **Save & New** (you'll be adding some more fields momentarily...)

Now, whenever you add a new record directly to the **Meeting** object, SF will give you a choice of the existing **Pitch** records to connect that meeting record to. (They'll appear in a popup window list you can choose from.)

Ok, you created **Meeting** and you connected it to **Pitch**. Good. Now you want to move those **Pitch** fields that don't belong there into **Meeting**. Unfortunately, you can't just drag & drop them. Sorry. You have to create them in **Meeting** and then delete them out of **Pitch**.

Relax. You know how to add fields. For each one, you just select the data type you want, then click **Next**, then fill in field label and whatever, then click **Next > Next > Save & New**, right? Now just do all that to create those five fields from **Pitch** that will now be in **Meeting** instead. For each of the next five steps, just use the values given and add the new field:

74. To add the first one, pick data type **Date**; in **Field Label** enter “Meeting Date” and check **Required** (only for this first one, though) then **Next > Next > Save & New**

Now do the same thing for the rest of the four fields. Just use the values given in each step and do the **Next** (pause), **Next** (pause), **Save & New** thing at the end of each one:

75. Pick data type **Text Area**; in **Field Label** enter “Comments” and then just finish it & go on
76. For the next one, pick data type **Text**; **Field Label** = “Contact Name” & **Length** = “30”
77. Next, pick the data type **Phone**; **Field Label** = “Mobile”
78. Last one: pick the **Email** data type; **Field Label** = “Email” (but still click **Save & New** again at the end!)

Now one new field—Riley said for each meeting, she also likes to record how enthusiastic the person is on a scale of 0-5 (5 being super-excited and 0 being “meh”). Guess it helps her bluffing & such.

79. Use the **Number** data type with **Field Label** = “Enthusiasm” and **Length** = 1 and **Decimal Places** = 0, but this time just **Save** at the end—no more fields to add

Step 2. Enter the details Step 2 of 4

Previous Next Cancel

Field Label ⓘ ←

Please enter the length of the number and the number of decimal places. For example, a number with a length of 8 and 2 decimal places can accept values up to "12345678.90".

Length ← Decimal Places ←

Number of digits to the left of the decimal point Number of digits to the right of the decimal point

Field Name ⓘ

Now, whenever you view the details of a **Pitch** record, you can also see a list of the related **Meeting** records that go with that pitch! But first, you have to tell SF which of the **Meeting** fields you want to show up in the listing and you do that in the **Pitch** object settings:

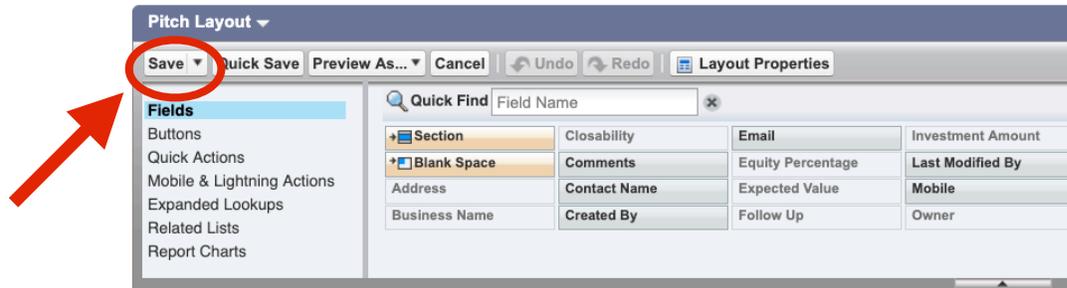
80. On the upper left, just above the title **Meeting**, click **OBJECT MANAGER** (blue) & then select **Pitch**
81. On the left, click **Page Layouts** and then click the down-arrow at the far right of the **Pitch Layout** row and select **Edit**
82. Scroll down to **Related Lists** at the bottom and click on the wrench icon to edit **Properties**
83. From the **Available Fields** list, find **Meeting Date**, click to highlight it and then click the **Add** button, with the right-pointing arrow to move it to the **Selected Fields** list
84. Repeat that last step for **Comments**, **Enthusiasm**, **Contact Name**, **Mobile**, and **Email** in that order (you can fix any ordering mess-ups by highlighting any field & using the up/down-arrows)
85. Click **OK** at the bottom of the popup (you might have to zoom out to see it—on a Mac, use **Command-minus**)
86. Then just scroll up a bit to find the **Pitch Detail** section on the same page

Ok, one last bit of restructuring left. Those fields that didn't really belong in **Pitch**—you added them to **Meeting**. Cool.

But they're still sitting in the **Pitch** object too. See?

We really should delete them but for now, it's easier to just hide them so they don't show up as part of the **Pitch** data when it's being viewed:

87. Just move the cursor over the first *victim*, **Pitch Date**, and you'll see it highlight in blue and the wrench & the minus button will appear on the right
88. Just click (you guessed it) the minus button to remove it from the **Pitch** display layout
89. Now repeat the last step for each of the other fields that shouldn't show up as part of the **Pitch** data anymore (**Comments**, **Contact Name**, **Mobile**, and **Email**)
90. When they're all out of the layout, click **Save** (upper left of the layout editor)



All good! That was a pain, I know. But worth it, bc now your new structure (“schema”) is super-improved and will keep your boss happy.

No more lost integrity. No more mysteries.

Check out the new structure:

91. Use the **App Launcher** again to go to **Marketing** and hit your **Pitches** tab and click on the **Pitch ID** for the one Spray & Pray record that's left, to open up the record details

The **Pitch** terms should show the current levels, as of the last (3rd) meeting (\$800k, 35%) and **Follow Up** should be 11/15/2019. But now click on the **Related** tab, to the left of **Details**. There's no meeting records in there yet, but there's that **New** button just waiting to be clicked:

92. Click the **New** button to the right of **Meetings (0)**
93. Notice that the new page, for adding in the data, shows the **Pitch** field already filled in with the right ID for Spray & Pray: **P-012**
94. Enter the **Meeting Date** for the first meeting: 10/7/2019
95. Enter the **Comments** which were “She thinks it's worth considering at the \$600,000 level (yay) for 30% equity, but she wants to see some more work on the revenue model.”
96. Enter the **Contact Name** as “Julia Chavez”
97. Enter the **Mobile** as “(510) 403-8995”
98. Enter the **Email** as “julia.chavez1981@gmail.com”
99. Enter the **Enthusiasm** as “2”
100. Click **Save**

That'll open up a page showing the details of the new record. (And places to log tasks, calls & emails below but ignore those for now.)

To add back the other two meetings easily, the **Clone** button is now our friend:

101. Click the **Meeting ID (Mtg-01)**, for the **Meeting** record you just created to open its details
102. Then click the down-arrow next to **New Opportunity** on the upper right and select **Clone**
103. Change the **Meeting Date** to 10/21/2019
104. Change **Comments** to “She liked the new revenue model, but now she’s driving a hard bargain!”
105. Change **Enthusiasm** to “5”
106. Click **Save**

Now for the last (3rd) meeting:

107. Click the down-arrow next to **New Opportunity** on the upper right and select **Clone**
108. Change the **Meeting Date** to 10/31/2019
109. Change **Comments** to “Counter-offered her. Hah! Hope she doesn’t call my bluff.”
110. Change **Enthusiasm** to “4”
111. Click **Save**

Now to admire your work:

112. Click on the **Pitch ID, P-012** (blue) in the current **Meeting** record details
113. Click on the **Related** tab (next to the **Details** tab)

The screenshot shows a CRM interface for a Pitch record titled "Spray & Pray Ventures". At the top, there are buttons for "New Contact", "Edit", and "New Opportunity". Below this, the "Investment Amount" is listed as "\$800,000.00" and the "Equity Percentage" is "35.0%". The main section has two tabs: "Related" (selected) and "Details". Under the "Related" tab, there is a section titled "Meetings (3)" with a "New" button. A table lists three meetings:

MEETING ID	MEETING DATE	COMMENTS	ENTHUSIASM
Mtg-01	10/7/2019	She thinks it's worth c...	2
Mtg-02	10/21/2019	She liked the new reve...	5
Mtg-03	10/31/2019	Counter-offered her. H...	4

Below the table is a "View All" link. A red circle with the number 3 is drawn around the "Meetings (3)" header.

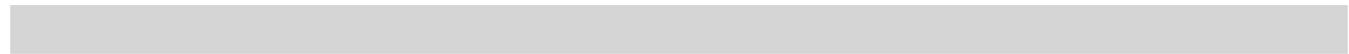
(If only **Mtg-01** shows up, go back to **Setup** & use the **App Launcher & Pitches** tab to get back here.)

Now the data looks the way Riley thinks of it: One **Pitch** record with one **Business Name** and the one set of current deal terms under negotiation (one **Investment Amount** and one **Equity Percentage**). AND below all that, there's the meeting basics for each of the three meetings with them (**Meeting Date**, **Comments**, **Enthusiasm**).

She can just hover on any **Comments** snippet to see the whole thing. And if she wants to access the other **Meeting** record data, like **Contact Name** or contact info, etc, she can just click **View All** at the bottom to see all the whole records and can change column widths, sort, etc, even edit or delete right there too.

See, now everything is set up to make it fast/easy for her to view/use the data the way she needs to do her job the best she can. And best of all, cloning can't hurt us anymore—no more redundancy bc we structured the tables/objects the way they make sense in reality to Riley: one pitch → many meetings.

Case closed, Watson. Crushed it! Now everything just stay nice for awhile, please?



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