

Tutorial 18: Designing a Simple set of Forms for a Database on Android

With version 4.6.300 of HanDBase for Android, there is now the ability to create custom forms for your databases. Custom forms creates unlimited possibilities in how your data is displayed and unleashes a new world of creativity for your databases.

In this tutorial we will demonstrate how to create a form from scratch- that is, we will start with a blank piece of 'paper' and then put together a usable form using a number of simple controls. We will also demonstrate using the form wizard to create a second form and link the two together.

For the sake of time, rather than start with a blank database, we will start with the EZ Shop sample database. This database is a shopping/grocery list and included with the program itself. It can be downloaded here if needed as well:

<http://www.ddhsoftware.com/gallery.html?show=number&record=4736&download=4736>

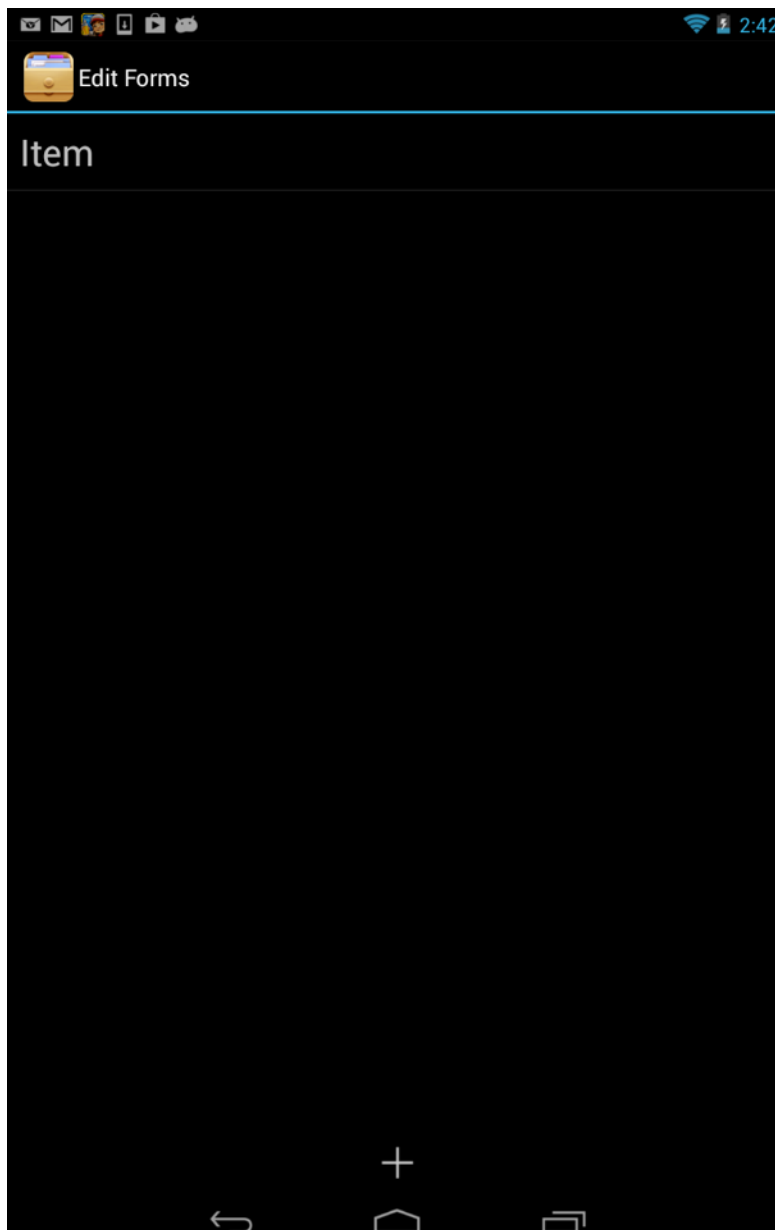
The EZShop database includes a sample form as of v4.6.300 as shown here:

The screenshot shows a mobile application interface for a database form. The top bar is dark blue with a title 'Item' and navigation icons (checkmark, X, plus, left arrow, right arrow, and a menu icon). The form itself is on a yellow notepad background and contains the following fields:

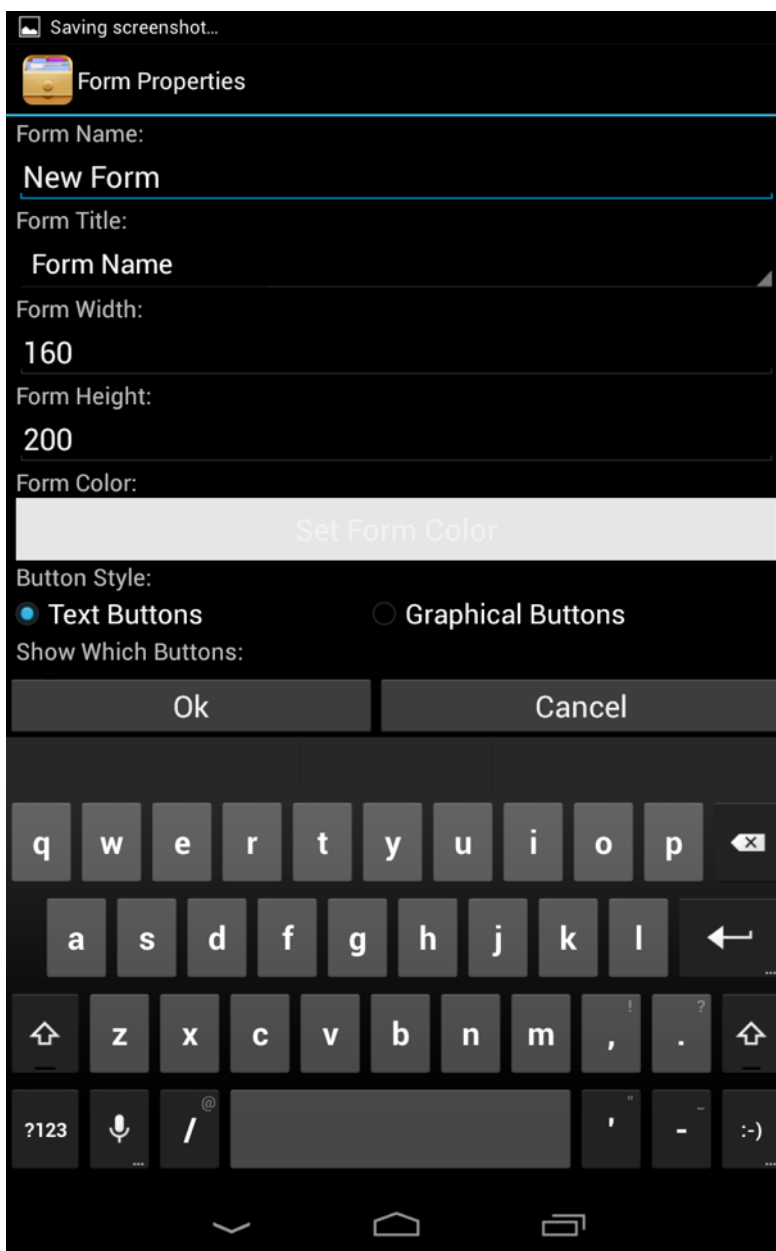
- Buy
- Item: Bottled Water
- Price: _____
- Qty: 1
- Coupon
- Cpn
- Exp: No Date
- Other
- Store: Grocery
- Aisle: -enter aisle-
- Dept: Beverage

90% of the time, there are only a few fields that you'd be using in this database- perhaps the Buy, Item, and Qty fields. The others may be used on occasion, so having them on the form only makes the screen more cluttered. Perhaps we can design our form to be a simpler version of this form, and have a second form that we can jump to if we want to view or fill out those other items. And so we begin..

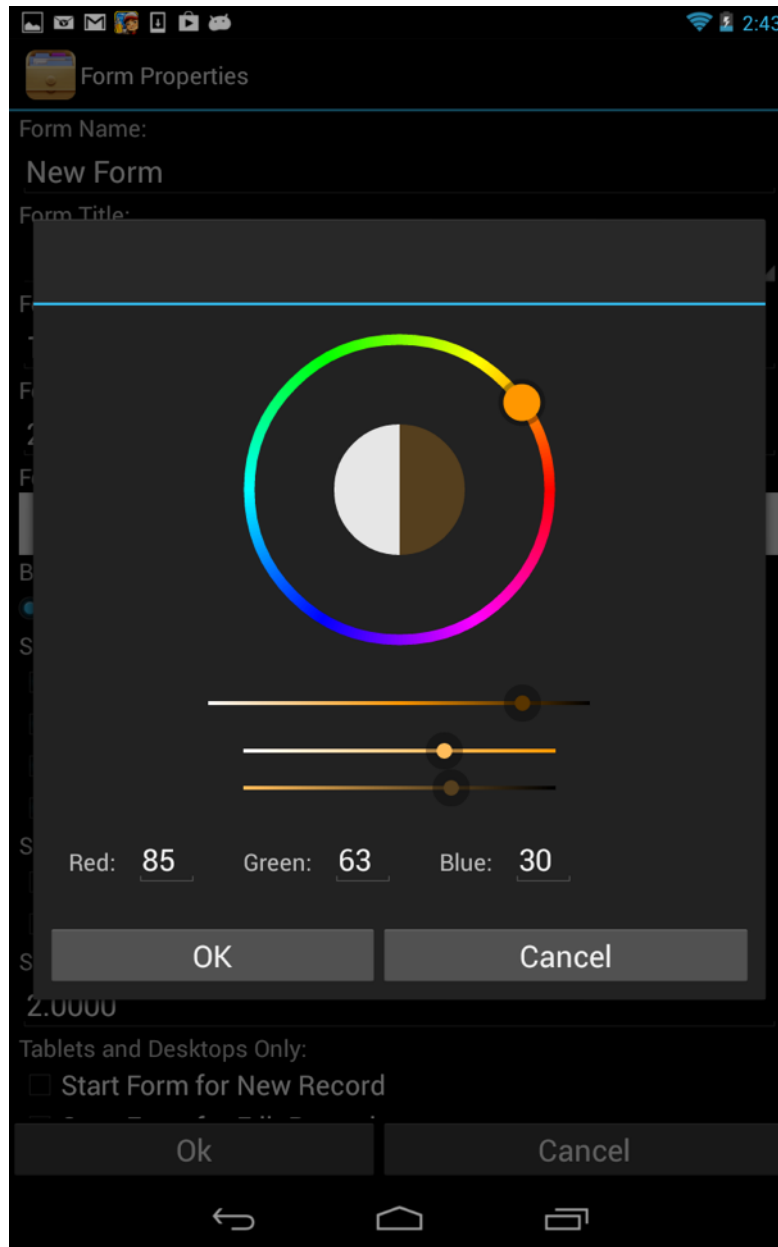
1. Open EZ Shop from the Choose DB Screen.
2. Select Tools and then DB Properties.
3. Choose the Forms option in the list. (If you haven't purchased the Add-on for the forms designer, you will need to do so now in order to continue this tutorial) You should then be shown the Forms List screen:



4. In this case, the sample form that is included with the program is already there, but we will ignore this and create a new one by pressing the +/New button at the bottom of the screen.
5. After pressing new, choose the Add Blank Form. You're now presented with a menu of form details:



6. Provide this form with a name, such as: Edit Item by tapping the Form Name box and entering 'Edit Item'.
7. Scroll down and select the form color and choose a color for your background. In this example, we are choosing a brown color:



8. Scroll down to the section labelled Smartphone screens and tap each section for New and Edit records:

Form Properties

Set Form Color

Button Style:

Text Buttons Graphical Buttons

Show Which Buttons:

OK Button

Cancel Button

Delete Button

New Button

Smartphones Only:

Start Form for New Record

Start Form for Edit Record

Scale Factor:

2.0000

Tablets and Desktops Only:

Start Form for New Record

Start Form for Edit Record

Scale Factor:

2.8000

Palm OS Devices Only:

Start Form for New Record

Start Form for Edit Record

Scale Factor:

1.5000

Windows Mobile Devices Only:

Start Form for New Record

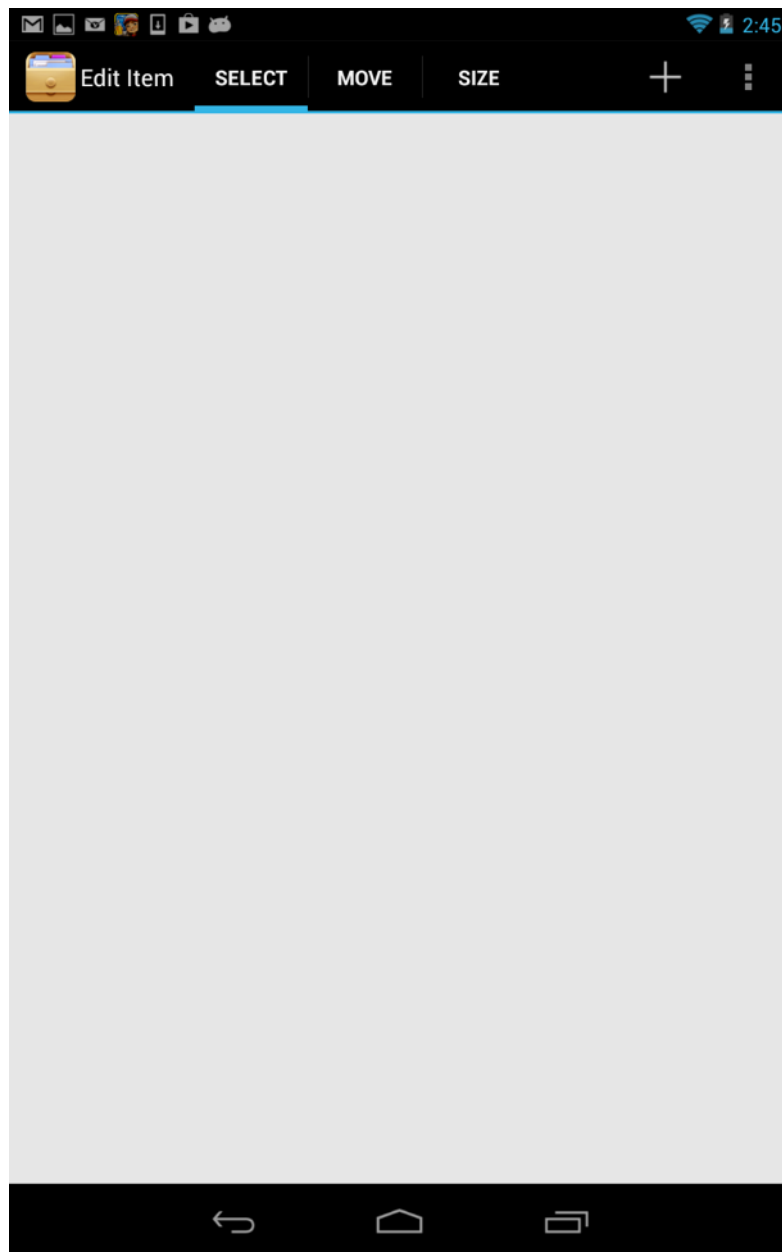
Ok Cancel

9. This indicates that the form we're designing will be the one that shows when editing a new record or an existing record. If you're editing on a tablet or a very high res/larged screen smartphone, you may need to also set the 'Tablets and Desktops Only' Start forms as well since these devices will classify as a Tablet and not a smartphone due to their size and density.

10. Leave all the other settings alone, such as form width, height and whether this will be the start form for other platforms. Press the Save button to return to the list.

11. Now your form should be listed along with the sample form. Select it and choose the Edit option (pencil icon) in the buttons at the bottom.

You're now presented with your blank canvas:



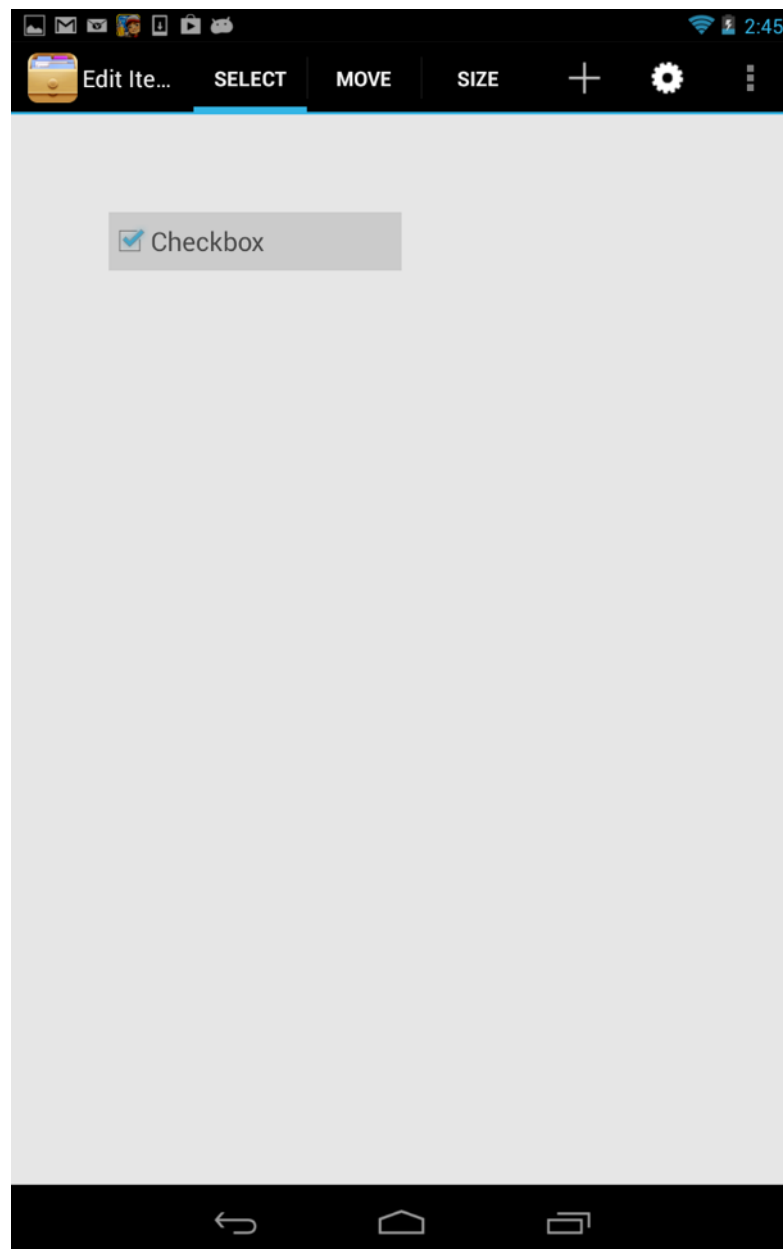
12. It's now time to populate the form with your controls and design. As we stated earlier, this primary form will have the three fields:

Buy, a checkbox.

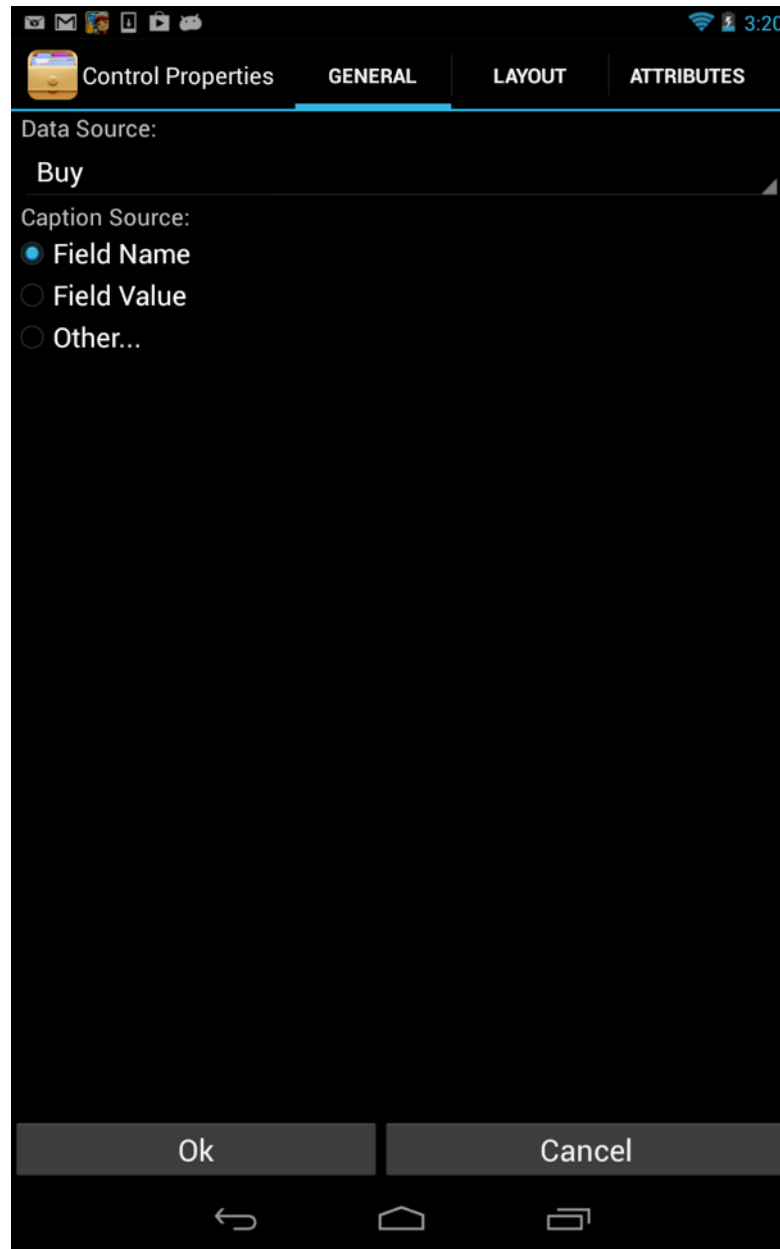
Item, a text box to enter the item to buy.

Qty, an amount field. For this field, we could use a popup to bring up a popup to select the quantity, but instead, let's use a list box so we can quickly select the quantity without having to tap to bring down a popup list. This will save valuable time when using this database to quickly fill out a grocery list before heading out to the store.

13. Select The New (+) button. Choose to add a Checkbox to the form:



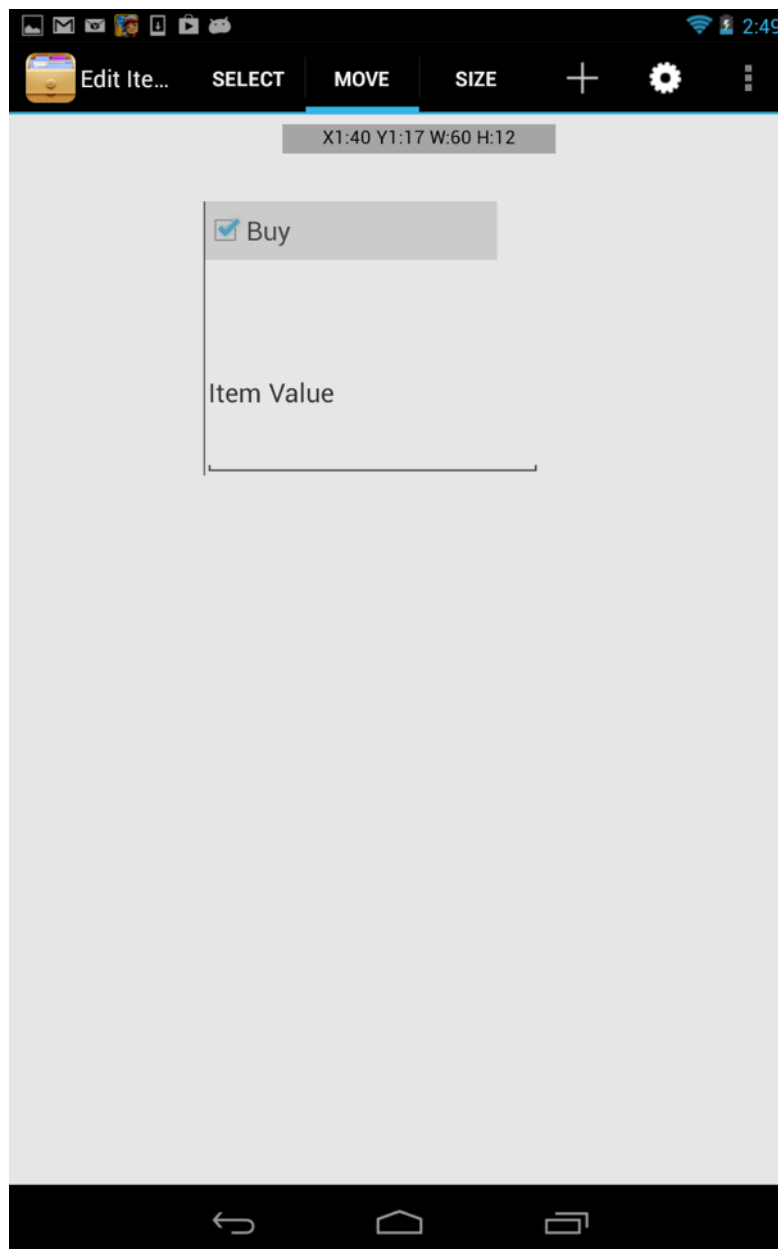
14. Now, let's adjust the settings of this checkbox. Press the Settings button (gear icon):



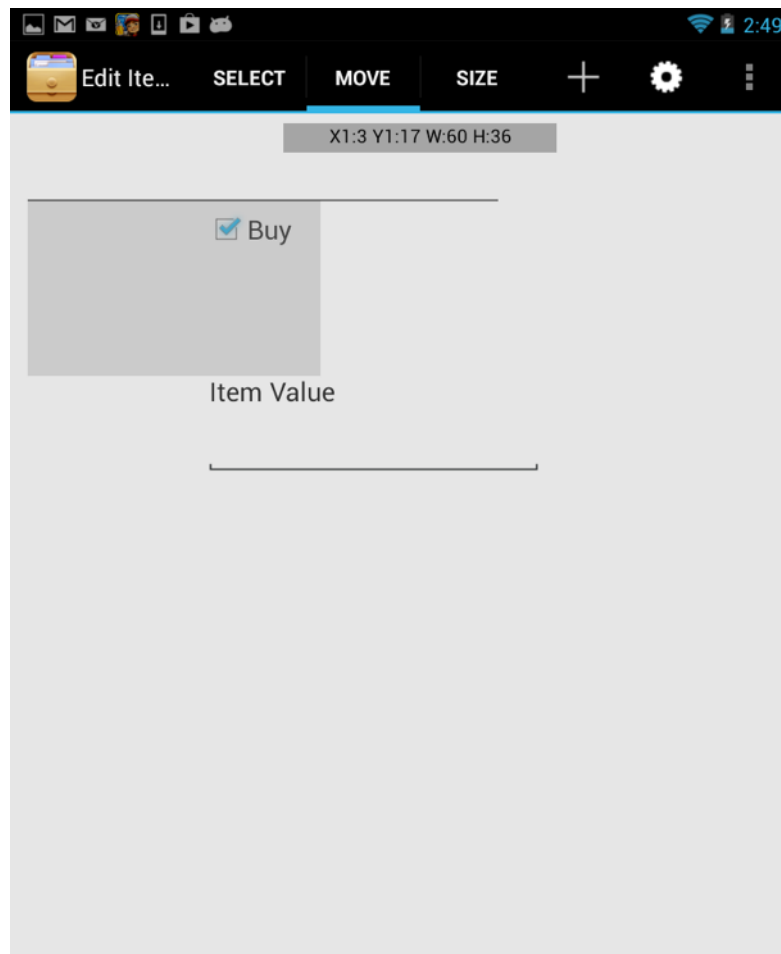
15. We need to point this checkbox to the Buy field in the database. Press the value that reads No Field and select the Buy field from the list that pops up. The caption for this checkbox should probably be the word Buy, so we can set the

Caption source to be the field name. (Alternatively, we could hard code it in the 'Specify Caption' box). Press Save to save these settings.

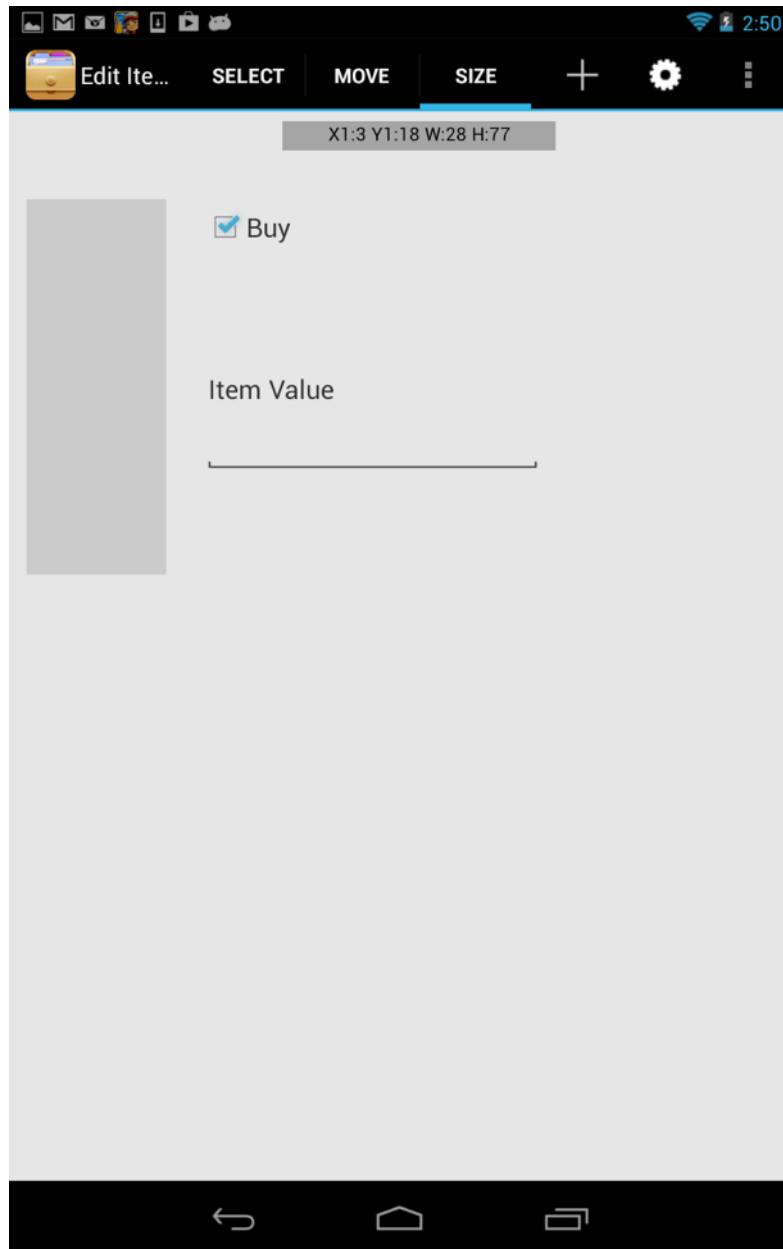
16. Now let's add our item description field. This will be a Text Box. Press the + button and choose Text Box from the popup list of controls.
17. We'll probably need to make this larger so more text can be entered/read. Press the Size mode button at the bottom to switch to a sizing mode. Now any finger movement on the screen will result in resizing the control. In particular, dragging right will make the box wider, left would make it smaller, down would make it taller and up would make it shorter. For this field, let's go with a wider and taller box, so drag diagonally down and right.



18. Press Settings to adjust the settings for this text box. In this case, we simply need to point the Data Source to the Item field. Press Save to save these settings.
19. Now let's add our quantity list box. Select +/New and choose List Box.
20. We'll need to move this into place later. For now let's change the settings of this to point it to the Quantity field. Press the Settings button, and choose the data source to be the quantity field. Press Save to return to this screen.
21. For the sake of speedy entry, it would be better to have a bunch of choices available for this list. Since the entries are not likely to be more than a single digit or two, the width of the control is not as important as the height. So it's time to do some arranging:
 - a. Let's change to the Select mode at the top and choose the Buy Checkbox by tapping on it.
 - b. Select the Move mode at the bottom to move it to the right a bit, and try to align it with the Item Value text box's left edge. When they are aligned, you'll see a vertical bar indicating they are aligned.
 - c. Let's switch back to the Select mode and choose the List Box (that may be an empty box).
 - d. Switch to the Move mode, and move this to the left of the Buy and Item buttons, aligned with the top edge of the Buy button.

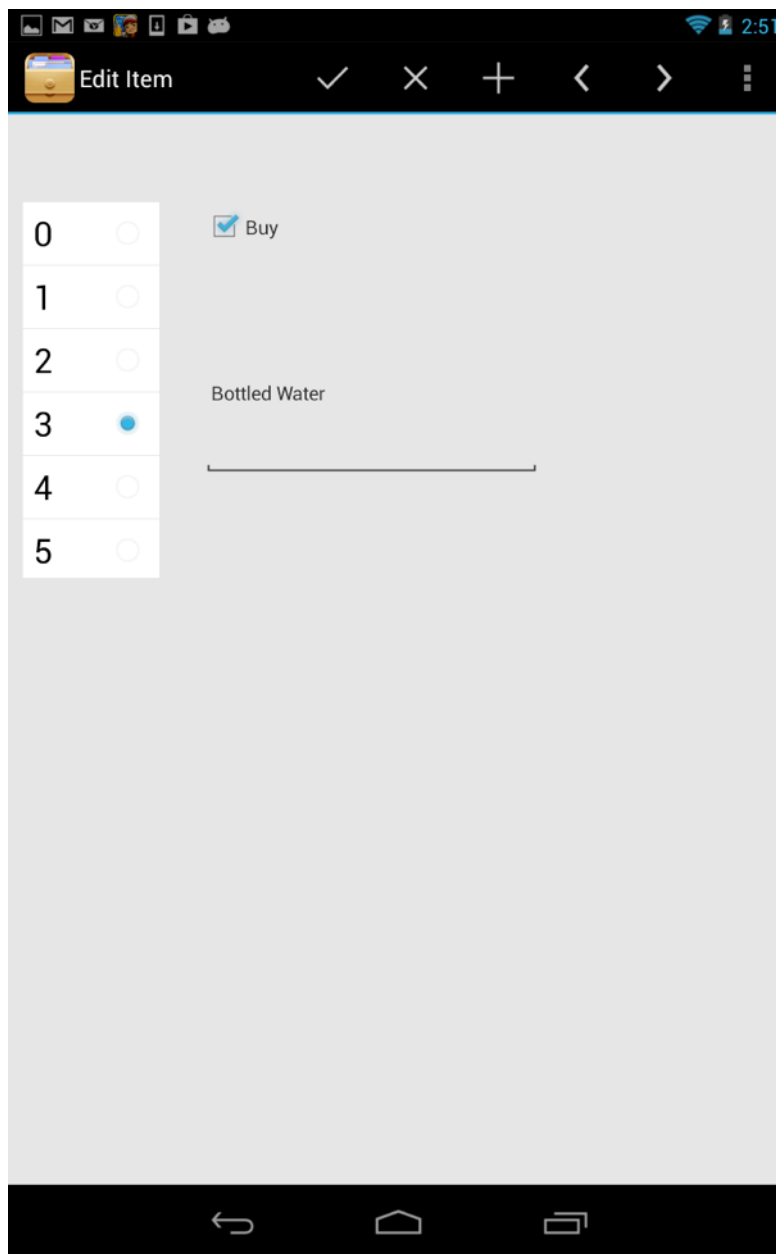


e. Switch to the size mode and resize it so it's long and skinny running alongside the other fields.



22.

So we have our basic form now, let's try it and see if it works.. Select the Back button to return to the form list, and again two more times until you return to the List View. Now tap a record and open it up.



If all goes well you should see a form like the above. If you don't, then likely you forgot to make the form your start form for Smartphones or Tablet screens. Please revisit that section above and try again!

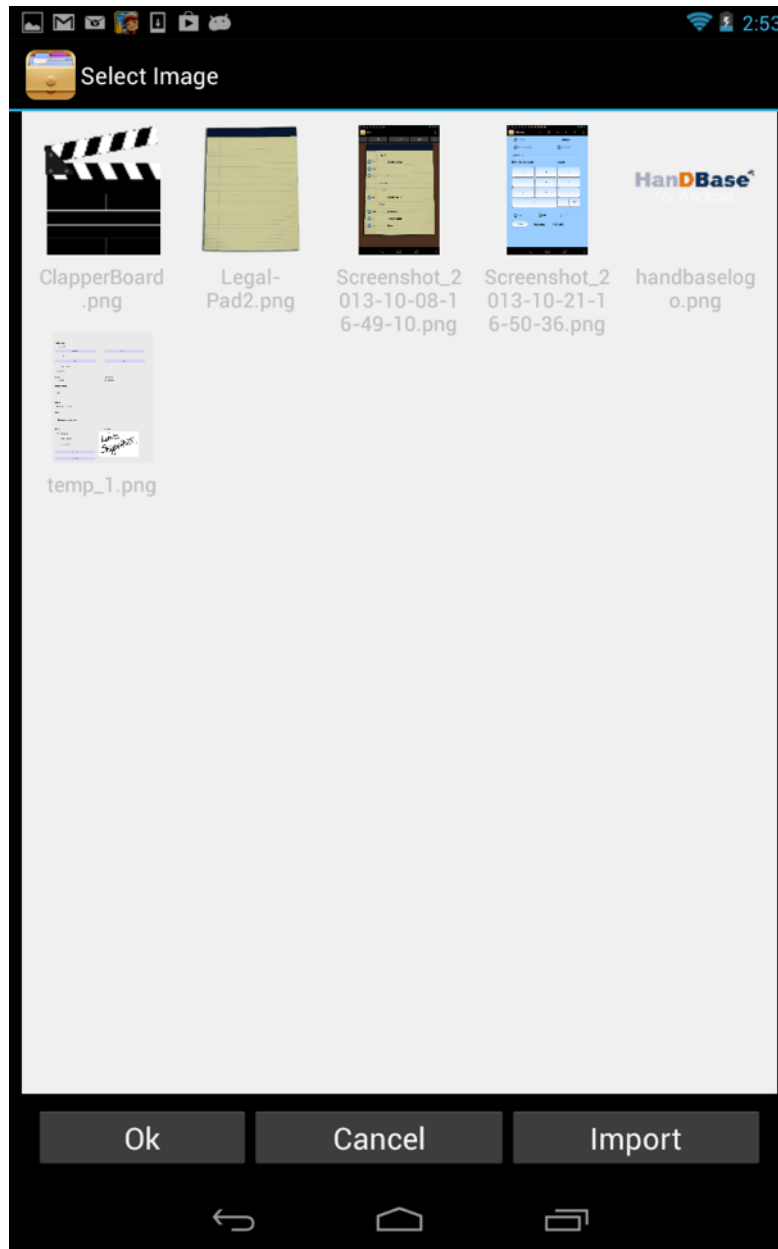
23. So this form has the most basic functionality there, but what about the look of it? It is kind of sparse and could use some style! Let's hit cancel, then Menu, Database Properties, Forms to return to the Forms list. We can tap the Edit Item form and choose Edit to get back to the Form Editor.

If you've seen the built in EZ Shop form, it has a graphic background of a note pad. This is simple, but fitting for the type of database we're working with.

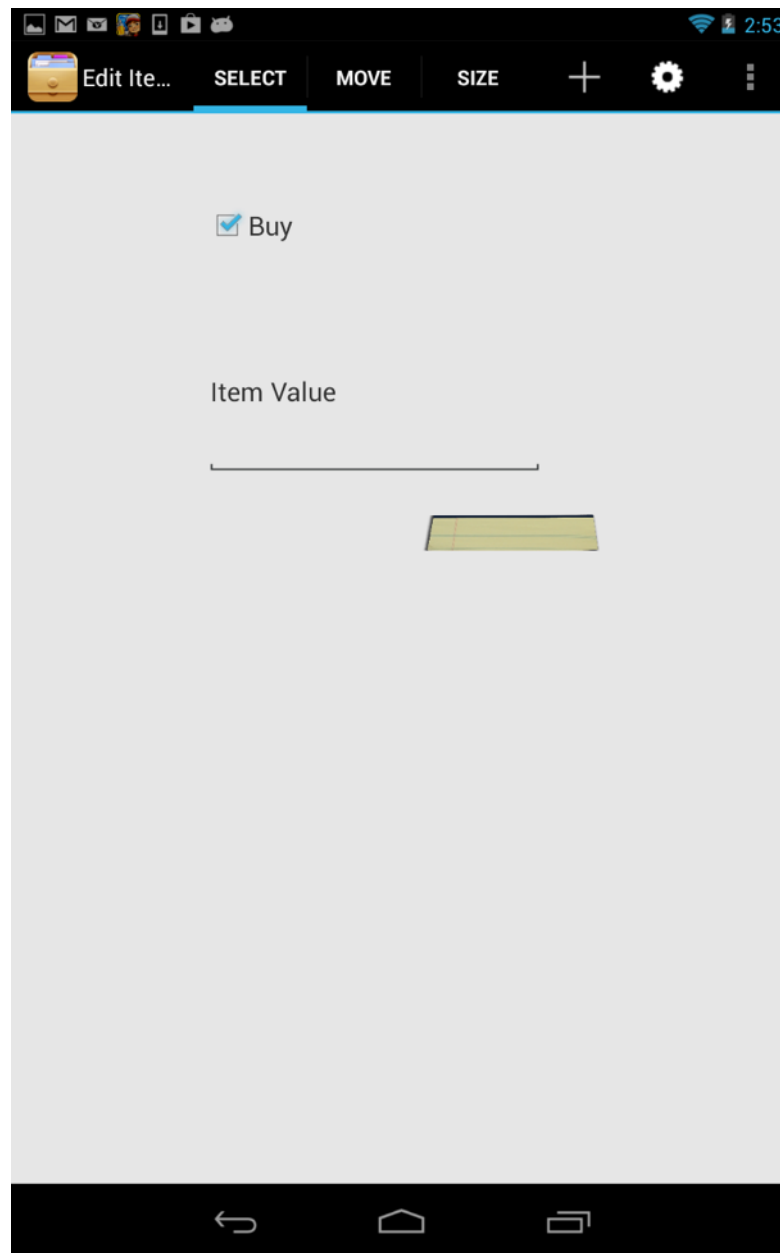
24. Let's add it as our background here as well. Press the +/New button and choose Picture from the list.

25. Tap the Settings button and let's assign an image file to this picture. Scroll down to the section where it reads 'Specify File' and tap the Other button below it.

This will bring up the image browser. Scroll through the list of images until you find the note pad image. Press the OK button to choose it.

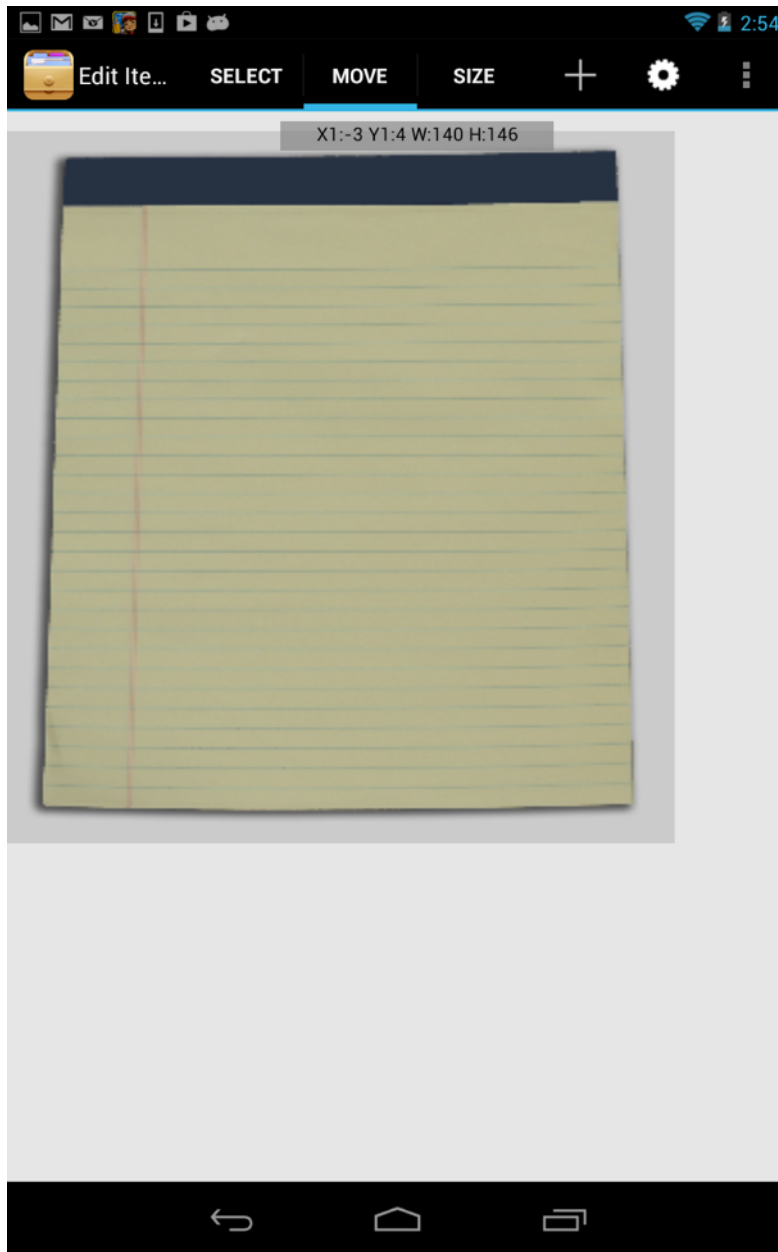


You'll note the Legal-Pad2.png file name is now listed in the file name. Press the Save button to save your changes.



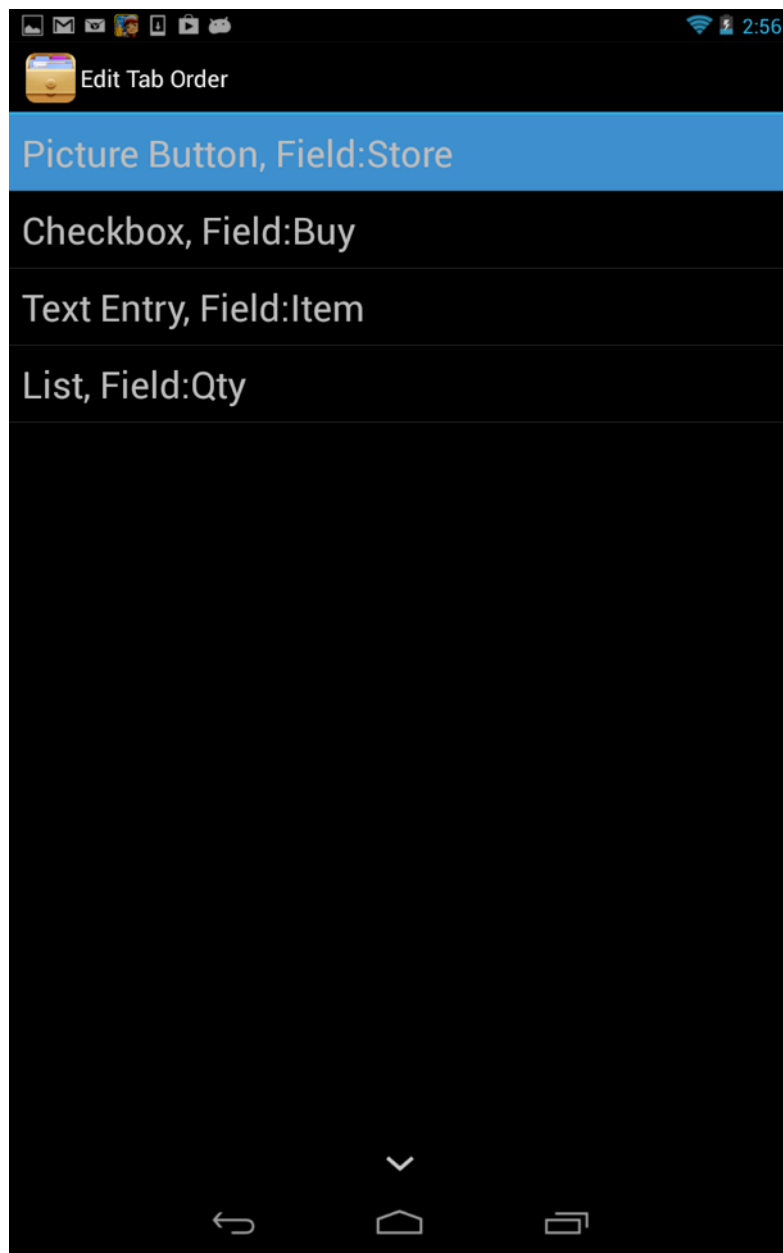
How does that look? Not quite the work of art you expected right?! We will need to size and position the notepad image to fill the screen.

26. Select the Size Mode and drag down and right to make the image fill the screen. You may have to switch to the Move mode and move it left and up a bit. You'll want to cover the entire set of controls we've made so that you can't see them at all.

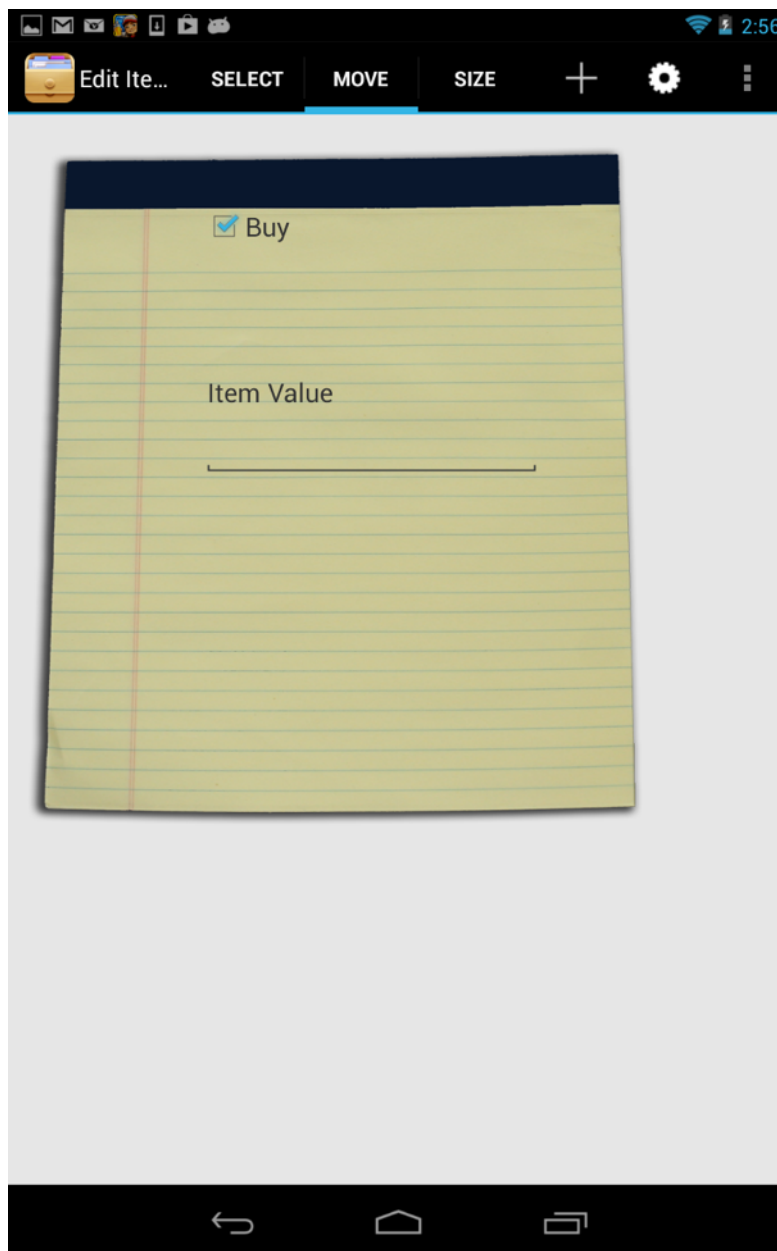


So that looks better, but what happened to the controls? The reason we can't see them is that HanDBase draws the form controls in the order they were created. Since we added this last, it's drawn last, and hence on top of everything else. How do we fix this? We need to change the tab order or creation order of the form.

28. Press the Menu button and choose Adjust Tab Order.



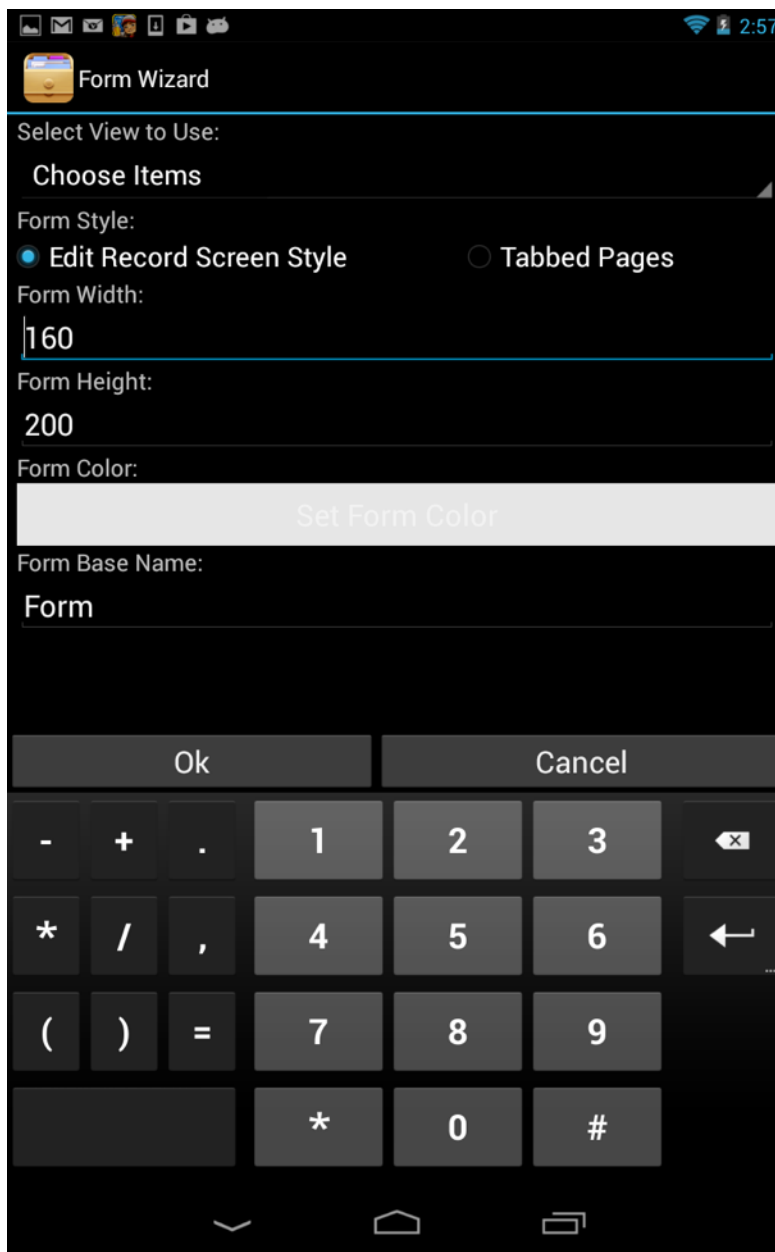
29. Let's move the Picture Button to the top of the list so its drawn first, before all of the other controls. To do this, select the item labeled Picture Button and then tap the up button shown along the bottom until it's at the top of the list. Now press the back button.



Now we can see the legal pad and the controls all nice on the screen. Much better!

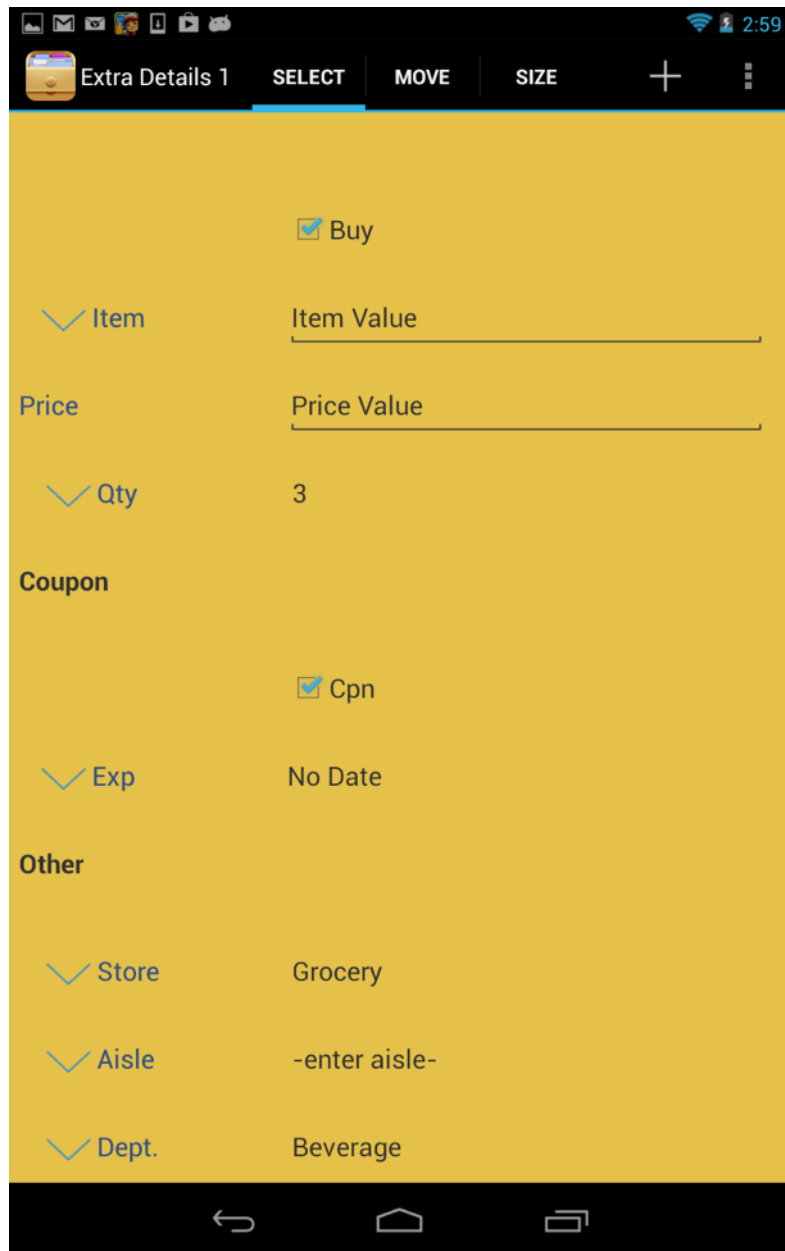
So what is left to do? We left a lot of fields off the screen, ones we rarely use- but what if we need to access them someday? Let's add a second form and include only those controls we are not using much. Then we can jump to them from this screen as needed. Select the Back button to return to the form list.

30. Choose New/+ and choose 'Add Using Wizard'. Now we see the Form wizard settings.

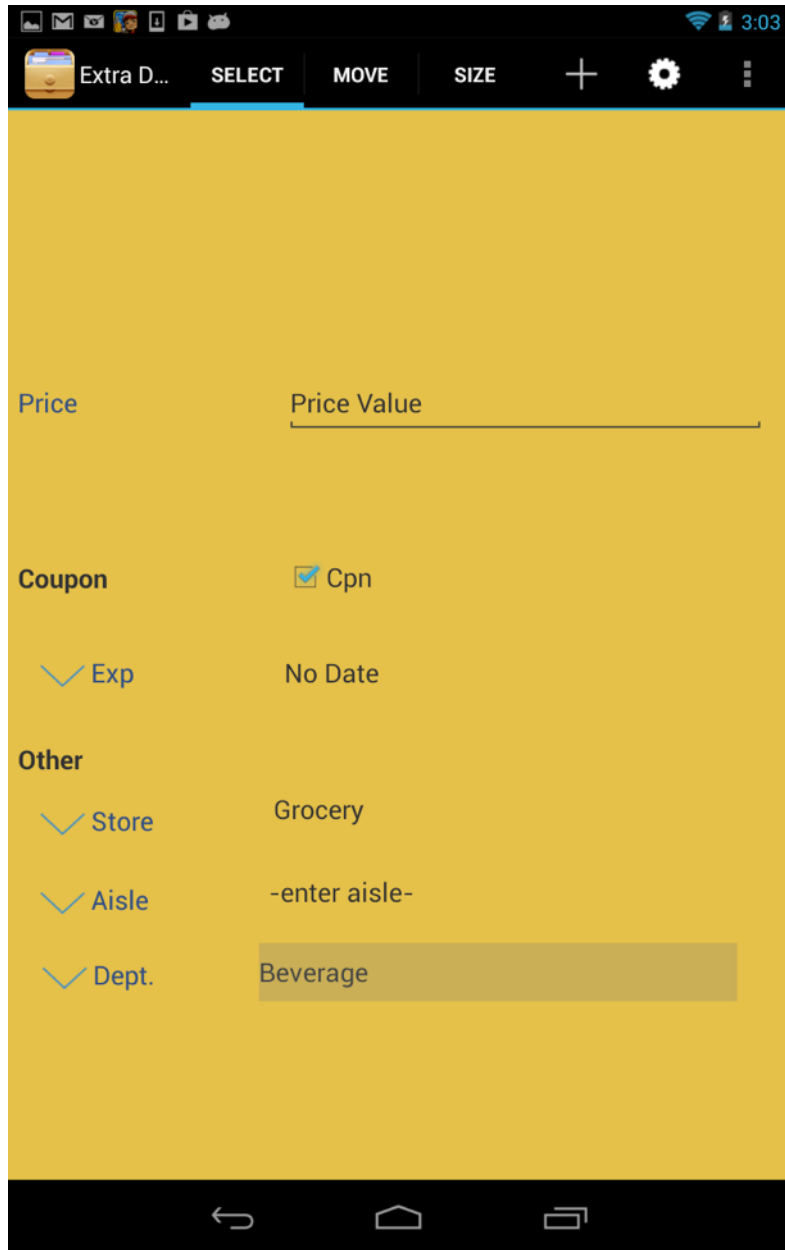


31. Most of this can be left alone, but we should choose the form name and color here. Select a color to match or coordinate with the form we already created. Choose the form base name of Extra Details and press Create to have the form created for us.

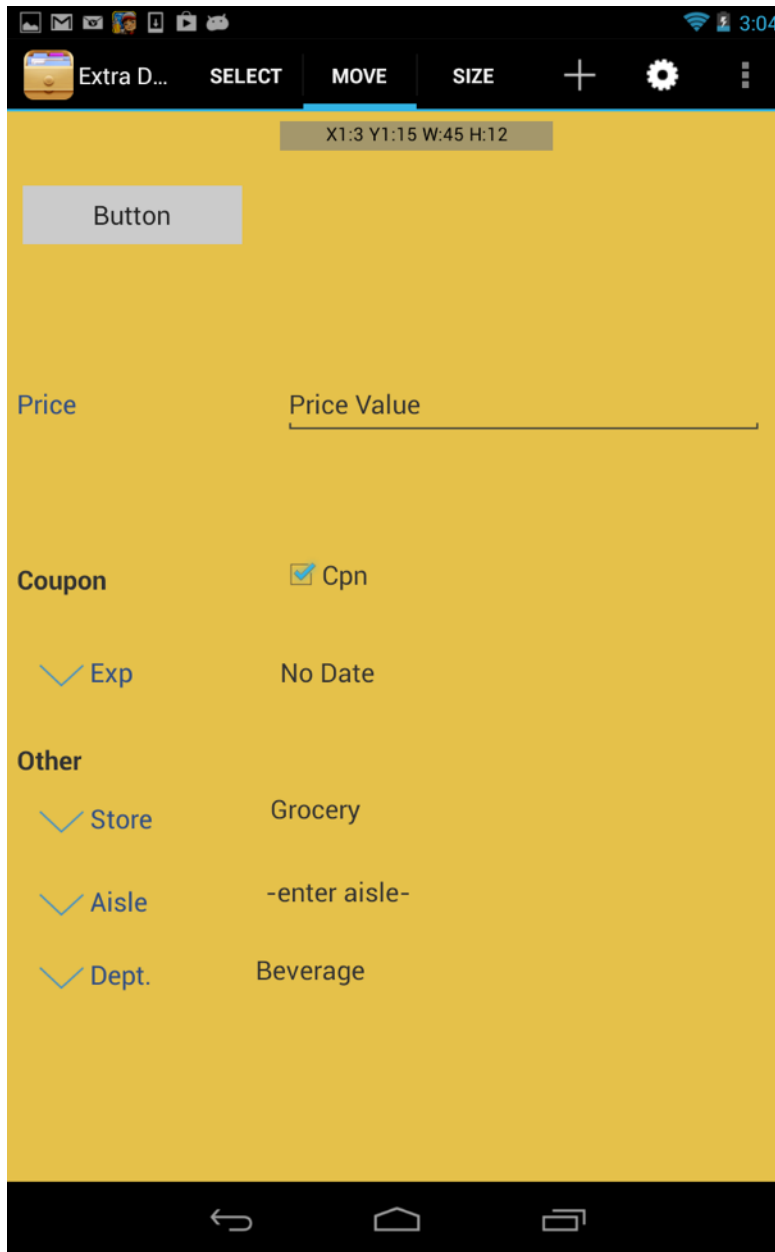
32. Now let's edit the new form and see what we have to work with. Select 'Extra Details 1' and choose the Edit button. So here we have a complete set of fields, including the ones on our other form. We'll just need to do some clean up work to get rid of the controls we don't need...



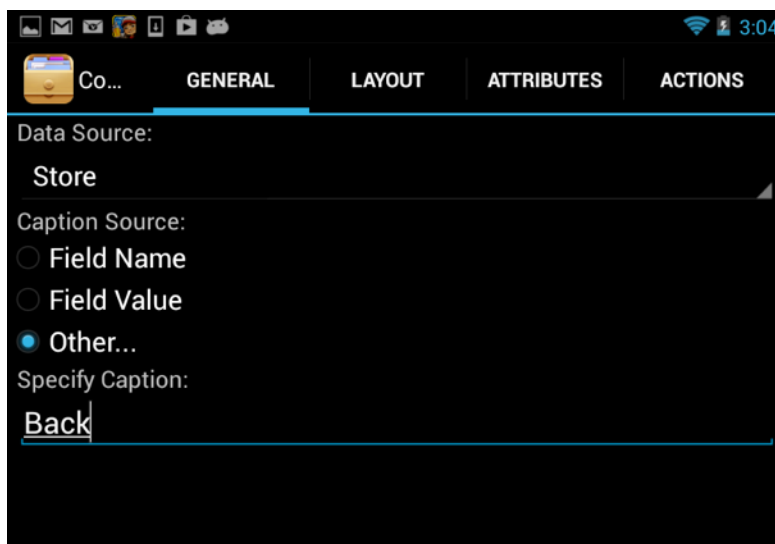
33. Choose the Buy checkbox and then press the Menu, Delete Control button. Confirm the delete and repeat for the Item Popup selector, the Item Value box, the Qty popup selector, the Qty Value label.
34. We will now need to move things around to fill the space left behind. Toggle between the Select and Move modes to do this, dragging each remaining control to fill the space left behind...



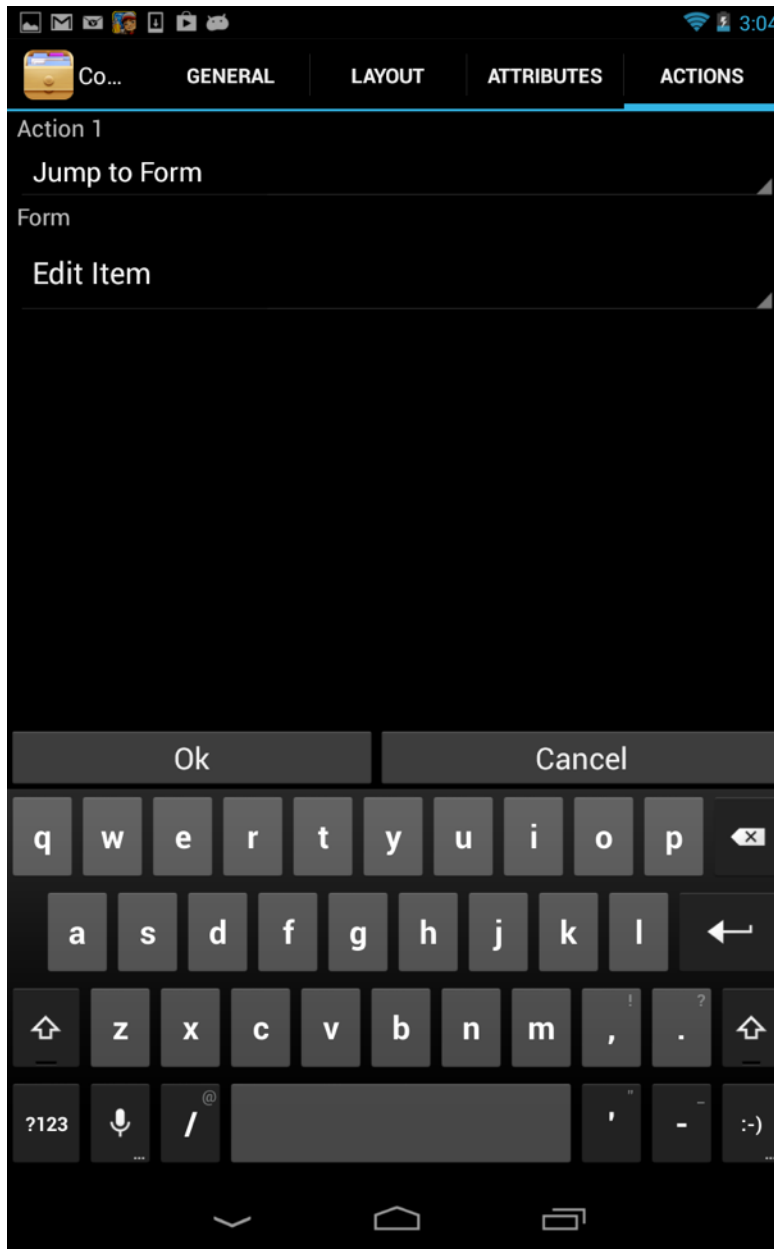
35. We'll need a way to return to the main form from this one. Let's add a button at the top of this form to return back to the other form. Press +/New and choose Button. Position this using the Move mode to the place of your choosing.



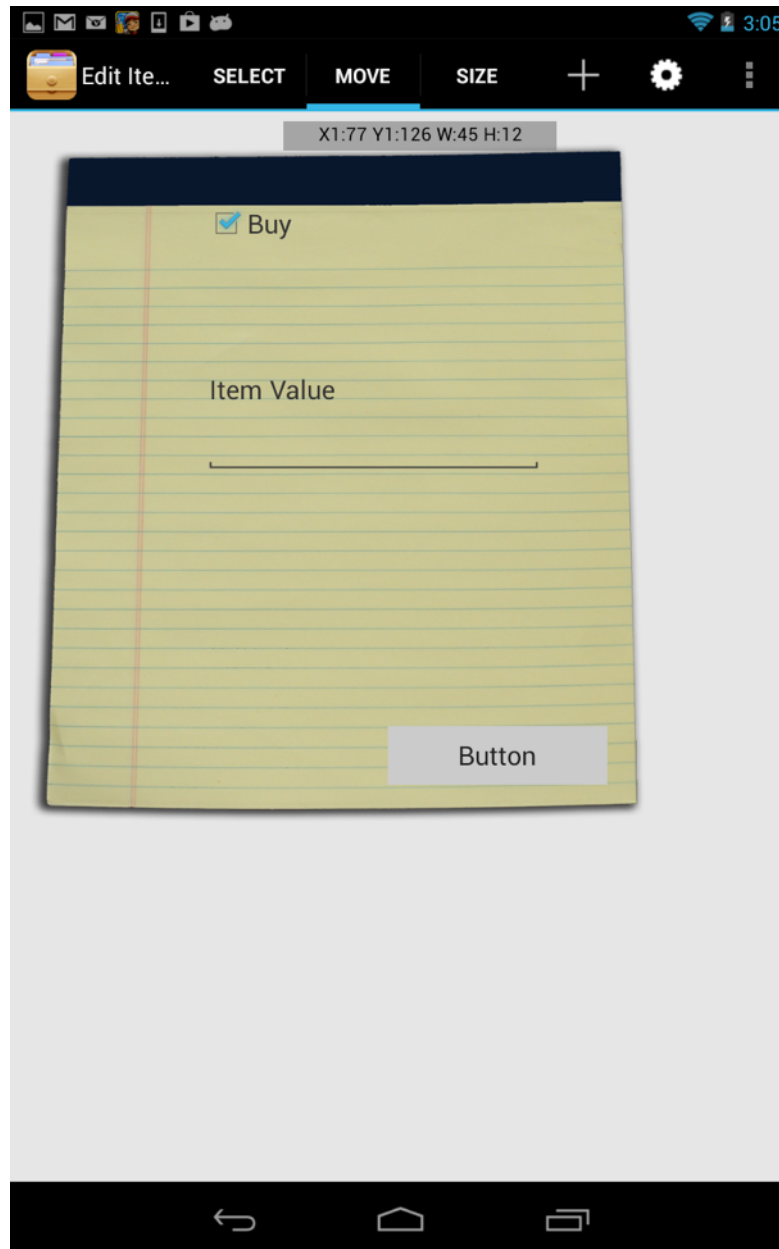
36. Now press Settings so we can adjust the settings of this button. The first thing is to change the caption to read 'Back'. Scroll down to Specify Caption and type the word Back in there. Tap the Other Caption source to set it to use this caption.



37. Now switch to the Action tab along the bottom and we'll set the action for this button to be Return to Form. The Return to Form action will return to the previous form we were in. Alternatively, we could have selected Jump to Form and selected our other form. Now press Save to save these changes.



38. Press the Back Button to return to the Forms List. We will now need to add a button to go to this form from our original form. Select Edit Item and choose Edit to edit that form again.
39. Press the + button and choose to add a Button control to our form. Place the button using the Move mode to wherever you see fit.



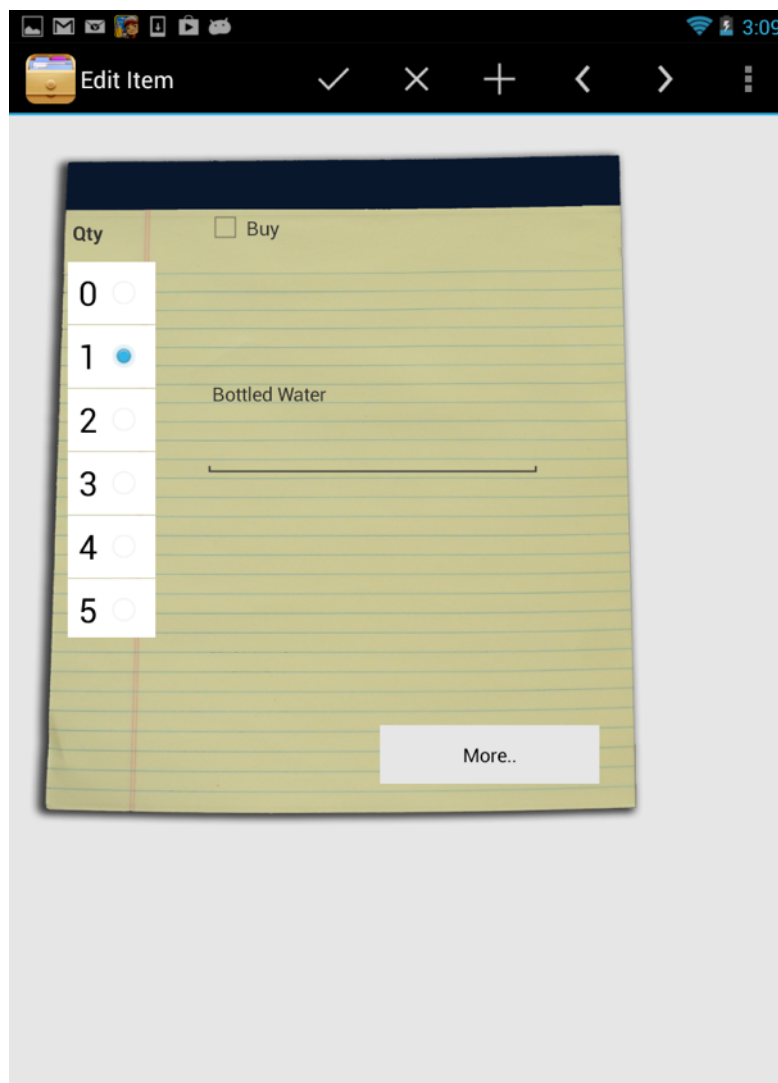
40. Press the Settings button and change the caption to read 'More..'. Choose the Actions tab.
41. Select the Button action Jump to Form and choose the Extra Details 1 form from the list.
Now press Save to save your changes. Press Back to return to the Forms list.

There are a few items we can clean up:

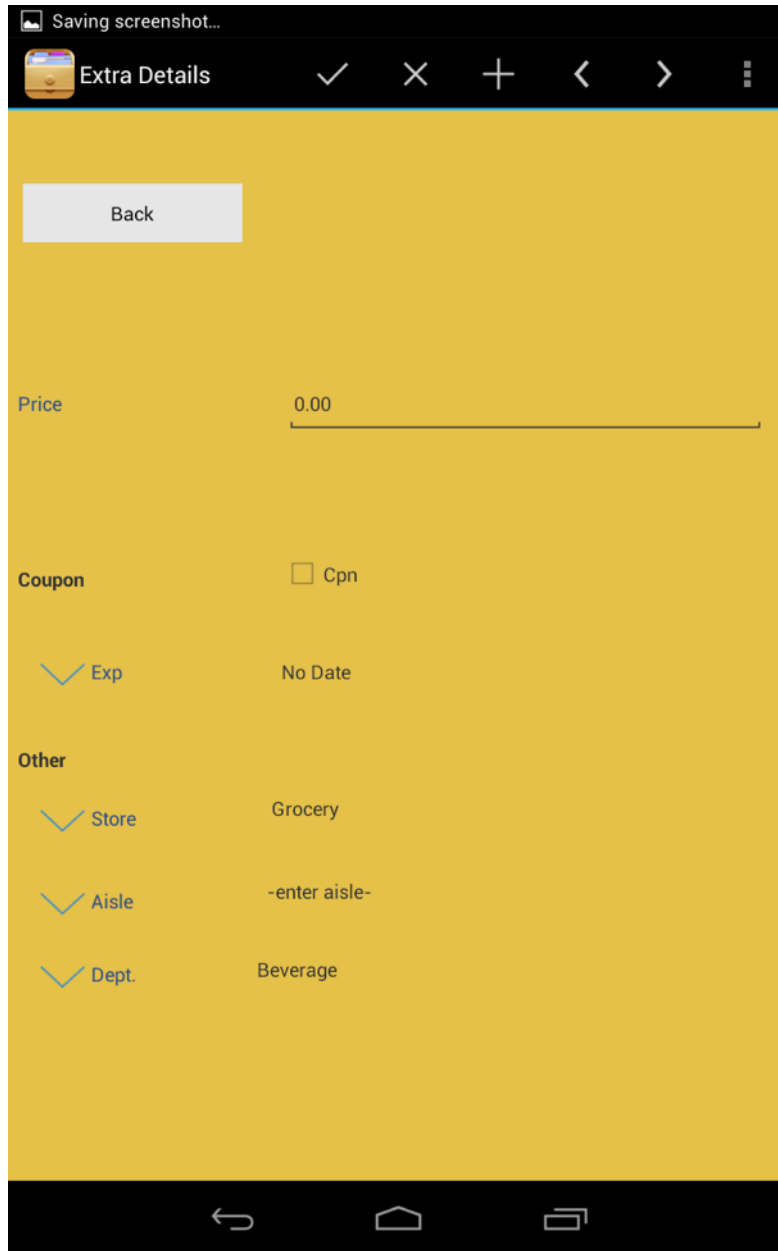
- a. The Form Wizard numbers its forms and the Extra Details 1 form should probably be renamed to Extra Details. To do this, Select the Extra Details 1 form and choose Properties. In the Form Name, change the name to strip off the 1 from the form name. Press the Save button to save the changes.

- b. Add a label control to the Edit Item form to put the Item Description title above the Text Box for it. To do this, Select the Edit Item form and choose Edit. Press the +/New button and add a label. Move the label into position above the Text Box (moving the Text Box down as needed). With the Label selected, press Settings and choose the Data Source to point to the Item field and the Caption Source to be the Field Name of that field. Press Save and Back to return to the Form list.
- c. Add a label control to the Edit Item form to put the Qty field above the List Box for it. To do this, Select the Edit Item form and choose Edit. Press the +/New button and add a label. Move the label into position above the List Box (moving the List Box down as needed). With the Label selected, press Settings and choose the Data Source to point to the Qty field and the Caption Source to be the Field Name of that field. Press Save and Back to return to the Form list.

The final step is giving the forms a try. Open a record from the List view and see if your form loads up as you'd expect:



Hopefully you'll find that pressing the More button takes you to your other form:



And that the Back button here returns you to the main form.

We hope you've been able to learn your way around the HanDBase Forms Add-on for Android and can't wait to see what forms you come up with for your databases! Please share your creations on our HanDBase gallery: <http://www.ddhsoftware.com/gallery.html> so as a community we can all benefit from a collective group of creative individuals!

If you need further assistance, we suggest looking at the documentation:

<http://www.ddhsoftware.com/knowledgebase.html?read=381>

(specifically the HanDBase for Android Forms Documentation available there).

Additionally, you may find answers to questions you have on our forums:

<http://www.ddhsoftware.com/forum>

We encourage you to join us there and hope to see you online soon!