

Cascading in ODK Build Offline

I have open Build Offline and created a new form. In **Settings > Form Properties**, I called my form '**Build cascading Demo**' (Title on Device) and '**Build_cascading_Demo**' (Instance name).

In **Setting > Translations**, I have added **Oromo** as second language.

I dragged a **Choose One**¹ widget onto the canvas and filled in the properties as shown in Figure 1 below.

The screenshot shows the ODK Build interface for a form titled 'CascadingDemoGhani'. The main canvas displays a 'Choose One' widget with the label 'What is the name of your woreda?' and the data name 'woreda'. The widget is marked as 'required'. The right-hand 'Properties' panel is open, showing various configuration options. The 'Data Name' is set to 'woreda'. The 'Label' is set to 'What is the name of your woreda?' in English, with the Oromo translation 'Maqaa abbaa warraa?'. The 'Hint' is set to 'English'. The 'Default Value' is empty. The 'Read Only' checkbox is unchecked, and the 'Required' checkbox is checked. The 'Required Text' is set to 'English'. The 'Options' section shows two options: 'Option 1' with the label 'Arsi Negelle' and the underlying value 'arsinegelle', and 'Option 2' with the label 'Shalla' and the underlying value 'shalla'. A 'bulk edit' button is visible next to the options. At the bottom, there is an 'Information: Cascading' section with the text 'Enable this to add a subsequent select question with filtered options.' The bottom toolbar includes buttons for '+ Add new', 'Text', 'Numeric', 'Date/Time', 'Time', 'Location', 'Media', 'Barcode', 'Choose One', 'Select Multiple', 'Metadata', and 'Group'.

Figure 1: Choose one drag and drop

Knowing that I want to implement cascading selects with the woreda (district) level first, then the kebele (sub-district) level after, I have prepared the tables shown in Figure 2 below in order to copy and paste each table in the appropriate preset. Please note that I have added a third level (zone) without filling in corresponding data. My purpose is just to show how a third level could be added.

¹ Why not call this widget simply **Select one** as opposed to **Select multiple**???

Preset	Level 1			
woreda				
	Underlying Value	English	Oromo	
	arsinegelle	Arsi Negelle	Arsii Nageelle	
	shalla	Shalla	Shaallaa	
	</			

Figure 2: Prepared presets in Excel for cut and paste

I then clicked **bulk edit** to enter the choices list for my first level, i.e. woreda. The Options Editor shown in Figure 3 below. I copied and pasted the woreda preset columns and saved the preset as 'woreda' the clicked **Apply** to save and exit.

Options Editor

Presets

Choose a Preset:
woreda ▼
Load Preset
Delete Preset
Save Below to Preset...

Options

Underlying Value	English	Oromo
arsinegelle	Arsi Negelle	Arsii Nageelle
shalla	Shalla	Shaallaa

Tip: you can copy cells from a spreadsheet (eg Excel, Google Sheets, etc.) and paste them into the table above to bulk-insert data.

Apply
Cancel

Figure 3: The Options Editor screen for the woreda (first level) preset

After that I clicked Cascading in the Properties Pane. A new widget is now added to the canvas as shown in Figure 4 below.

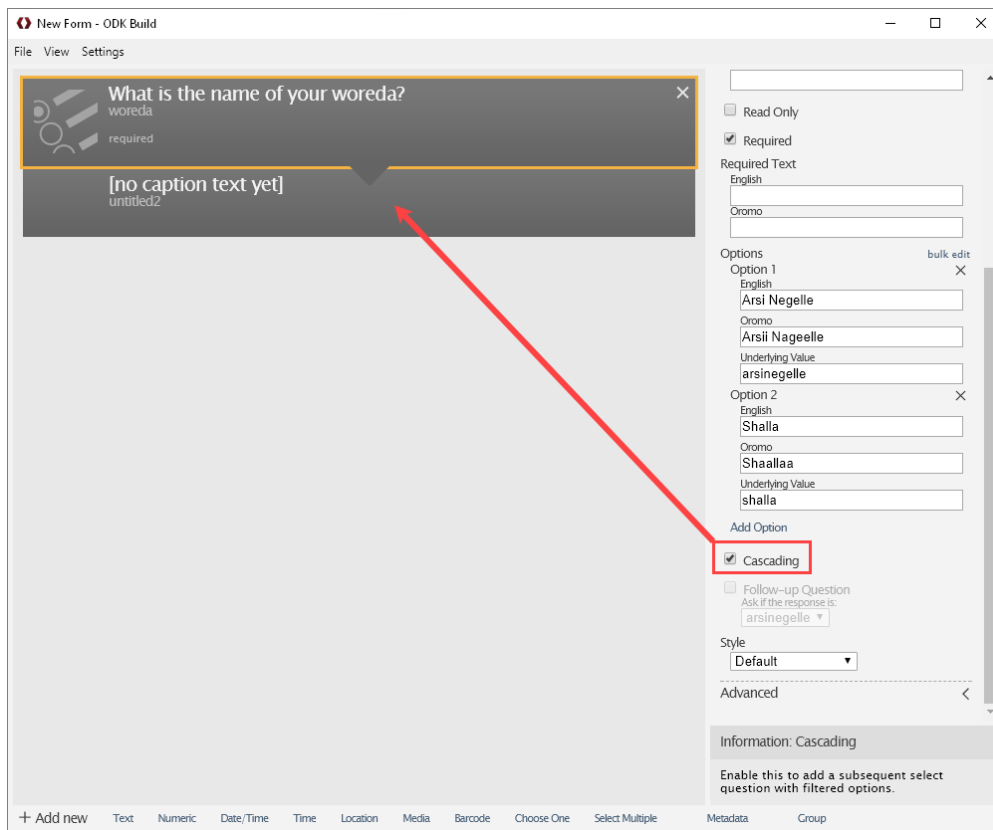


Figure 4: When Cascading is checked, a new widget is added automatically

I filled in the properties and clicked **bulk edit** as show in Figure 5 below.

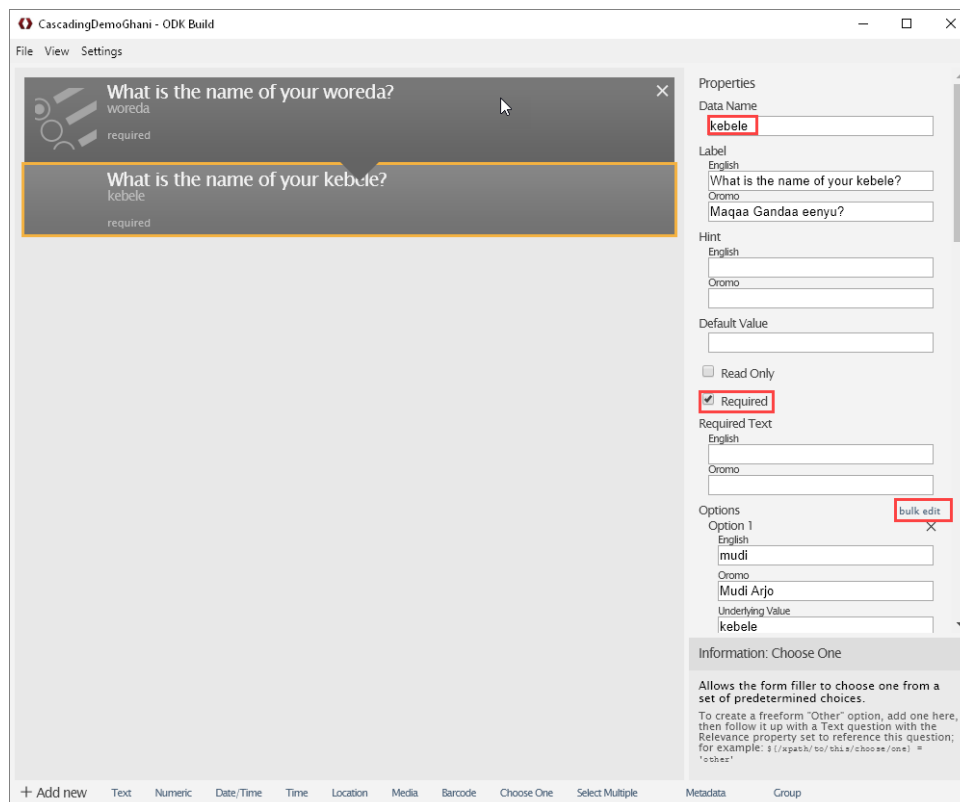


Figure 5: Opening the bulk edit of the kebele (second level) preset

The Options Editor for the second level (kebele) opened as shown in *Figure 6* below.

Options Editor

Presets
Choose a Preset: **kebele** Load Preset Delete Preset Save Below to Preset...

Options
woreda Value

Underlying Value	English	Oromo
arsinegelle	mudi	Mudi Arjo
arsinegelle	hade	Hade Boso
arsinegelle	keraru	Keraru
arsinegelle	alge	Alge
arsinegelle	bila	Shalla Bila
shalla	fende	Fende Ejersa
shalla	danisa	Danisa Bunge
shalla	arjo	Arjo

Tip: you can copy cells from a spreadsheet (eg Excel, Google Sheets, etc.) and paste them into the table above to bulk-insert data.

Apply Cancel

Figure 6: The Options Editor screen for the kebele (second level) preset

I could have added a third 'zone' level by checking Cascading in this new widget. The Options Editor for this third level would have opened as shown in *Figure 7* below.

Options Editor

Presets
Choose a Preset: **zone** Load Preset Delete Preset Save Below to Preset...

Options
woreda Value **kebele Value**

Underlying Value	English
untitled	

Tip: you can copy cells from a spreadsheet (eg Excel, Google Sheets, etc.) and paste them into the table above to bulk-insert data.

Apply Cancel

Figure 7: The empty Options Editor screen for the zone (third level) preset

But I didn't since I am interested only in the first two levels.

I have exported the Build form as an Excel workbook file to see what it contains. It contains 4 worksheets:

- survey: (see *Figure 8* below) Everything is OK except for a strange couple of empty parentheses () under **relevant** which prevented the form from being valid. This is clearly a bug. I had to delete it for the form to be validated;

- **choices:** (see *Figure 9* below) For each preset, the ***list name*** is choices_presetname. Everything is OK;
- **settings:** (see *Figure 10* below) the form-id column contains 'build_Untitled-Form_1520078572' which is not normal (**a bug?**) as it should use the form_title by default;
- **warnings:** this sheet contains only 'message' a column title. **It would better that if there are no messages, this worksheet is not created at all.**

Apart from the little imperfections mentioned above, cascading works perfectly in ODK Build Offline as shown in *Figure 12* below. Many thanks to **Clint Tseng**.

	A	B	C	D	E	F	G	H	I	J	K
1	type	name	label::English	label::Oromo	hint::English	hint::Oromo	required	constraint_message::English	constraint_message::Oromo	relevant	choice_filter
2	select_one choices_woreda	woreda	What is the name of your woreda?	Maqaa abbaa warraa?			yes				
3	select_one choices_kebele	kebele	What is the name of your kebele?	Maqaa Gandaa eenyu?			yes			()	woreda = \${woreda}
4											
5											
6											
7											
8											
9											
10											
11											
12											

Strange empty parentheses under relevant. **Must be erased, if not form not valid**

survey choices settings warnings

Figure 8: The survey worksheet

	A	B	C	D	E	F	G	H	I	J
1	list name	name	label::English	label::Oromo	woreda					
2	choices_woreda	arsinegelle	Arsi Negelle	Arsii Nageelle						
3	choices_woreda	shalla	Shalla	Shaallaa						
4	choices_kebele	mudi	Mudi Arjo	Mudhii Arjoo	arsinegelle					
5	choices_kebele	hade	Hade Boso	Haadha Boosoo	arsinegelle					
6	choices_kebele	keraru	Keraru	Qaraaruu	arsinegelle					
7	choices_kebele	alge	Alge	Aalge	arsinegelle					
8	choices_kebele	bila	Shalla Bila	Shaallaa Billaa	arsinegelle					
9	choices_kebele	fende	Fende Ejersa	Fandee Ejersaa	shalla					
10	choices_kebele	danisa	Danisa Bunge	Daannisa Buunge	shalla					
11	choices_kebele	arjo	Arjo	Arjo	shalla					
12										

survey choices settings

Figure 9: The choices worksheet

	A	B	C	D	E	F
1	form_title	form_id	public_key	submission_url	instance_name	
2	Build cascading Demo	build_Untitled-Form_1520071168			Build_cascading_Demo	
3						
4						
5						

Ready

survey choices **settings** warnings

Figure 10: The settings worksheet

	A	B	C	D	E	F	G	H	I	J	K
1	message										
2											
3											
4											

Ready

survey choices settings **warnings**

Figure 11: The warnings worksheet

Build cascading De...

* What is the name of your worda?

☒ Arsi Negelle

☐ Shalla

Build cascading De...

* What is the name of your kebele?

☐ Mudi Arjo

☐ Hade Boso

☒ Keraru

☐ Alge

☐ Shalla Bila

Figure 12: The form opened in ODK Collect